INTEGRATION OF HUMAN FACTOR AND ARTIFICIAL INTELLIGENCE IN CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN RETAIL COFFEE SECTOR IN THE UAE

by

Iqwinder Singh, MBA

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INTEGRATION OF HUMAN FACTOR AND ARTIFICIAL INTELLIGENCE IN
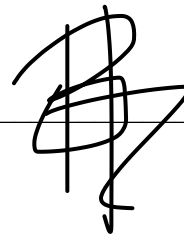CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN RETAIL COFFEE
SECTOR IN THE UAE

by

Iqwinder Singh

APPROVED BY

Vasiliki Grougiou
_____
Dissertation chair

RECEIVED/APPROVED BY:

Renee Goldstein Osmic
_____
Admissions Director

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Dedication

I would like to thank my instructor and mentor Dr. Giovanni Calice for his support to me from primary steps onwards on the present work. He has advised and guided me on managing the legitimacy and sustainability of this research and on the process of collecting the vital data. I would also thank all members of my family because it would not have been possible for me to achieve inspiration and financial support without their encouragement. On the other hand, I am grateful to all my educators for providing me with this research matter since I have taken vast information from accomplishing a critical description with respect to this present investigation. Furthermore, I have gained an essential opportunity that provided the essential personal and professional support that also assists me in understanding the major characteristics of this research. Therefore, it can be said that I have obtained many beneficial knowledge and aspects that enable me to develop useful recommendations.

Abstract

Introduction

The UAE coffee retail sector have been growing at a rapid pace that provides an opportunity for businesses to grow. There has been a prevalent use of technologies such as AI, but the role of human interaction cannot be undermined in the coffee retail sector. Considering this the research seeks to explore "Integration of human factor and artificial intelligence in customer relationship management practices in retail coffee sector in the UAE3"

Methodology

The research has adhered to a qualitative approach by considering the philosophy of interpretivism. The section has demonstrated that the use of deductive research approach ensures theoretical perspectives can be used to validate the findings. Data was collected from 50 participants and the collected responses have been interpreted using graphical analysis method. The researcher has also ensured that protocols related to reliability and validity has been followed and ethical standards have been maintained by providing rights to the participants and safeguarding their identity.

Findings and Discussion

From the section it has been found that the behaviour of the consumers in the UAE coffee sector is complex and diverse. A range of customer prefer higher AI interaction while human AI is also preferred by most of the customers. It is seen that when the customers are made to use more AI it can help their experience through fast and convenience orders. AI also allows better customer relationship management by faster query solving.

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Conclusion

The chapter of the study has concluded the findings and provided recommendations along with future scope of study. All four objectives of the study have been met while it has been recommended that a balance between AI and human interaction is maintained so that optimal benefits can be acquired by the coffee retailers of the UAE.

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Chapter 1: Introduction

1.1 Introduction

Given the high importance of customer satisfaction and engagement in growing the long-term profitability of a service-oriented industry, customer relationship management (CRM) has become an important factor for business success. CRM's evolution from traditional, human-driven interactions to AI-driven data-driven interactions has changed how businesses engage consumers. Rapid growth and intense competition in UAE's retail coffee industry offer a good case to study the integration of AI in the practices of CRM.

Due to the combination of cultural appreciation for coffee, the influx of expats, and technology advancements in the way they provide customer service, the UAE's coffee retail sector is one of the fastest growing in the region, said Muhammad Awad, Hub Director for the Coffee and Tea Category Management at Nestle Arabia. Currently, the sector is earning up to $1.23 billion a year as per the industry reports with a compound annual growth rate of 2.39% (Statista, 2024). The market is highly competitive resulting in increasing competition from the global coffee chains to the local specialty cafes, a struggle in which customer experience has become a differentiator.

Coffee retailers are adopting leading-edge means with which they can enhance customer loyalty as well as streamline their functions. Predictive analytics, automated chatbots, and data-driven personalization are these technologies of business that enable them to deliver customer promotions in their customized, improve customer interactions, and enhance service delivery (Grewal et al., 2023). But AI is not enough to replace the human side of service, as that emotional connection is still critically important when talking to customers. Concerns have been raised over the lack of human interaction in AI-driven CRM causing a loss of trust, customer

satisfaction, and cultural adaptability of CRM serving the UAE market (Rane, Achari, and Choudhary, 2023).

The implementation of AI is a challenge because we want to make AI as efficient as tasks can be automated, but AI technology always needs to be treated with human empathy. First, AI helps to automate repetitive tasks, which helps to be more efficient, however, it lacks emotional intelligence (EQ) and cultural sensitivity to provide high-quality customer service (Castelo et al., 2023). It is especially pertinent in the UAE, where such a diverse customer demographic requires both personalized as well as culturally tuned points of interaction. Without human involvement, AI drivers of CRM can end up putting you in a one-way relationship, which ensures less satisfaction and less brand loyalty.

The paper discusses how AI and human factors are integrated into the practice of CRM in the retail coffee industry in the UAE. The research is focused on assessing ways a hybrid CRM approach (AI's analytical capability with human-focus service) can enhance customer engagement and business results. This study helps businesses understand how to maintain personalization and emotional connection even as they bring AI to bear for operational efficiency through an examination of the strengths and limitations of AI human CRM models.

1.2 Statement of the Problem

CRM in the past has acted in customer service through human interactions for relationship building, brand loyalty, and an increase in customer satisfaction. Retail coffee businesses rely on employees of baristas, and customer service representatives, who contribute to delivering a personalized experience, remember customer preferences, and answer to individual needs. While AI improved CRM solutions in some ways, digital transformation is increasing and artificial intelligence is replacing human-led interaction for automation and data analytics (Finn

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and Downie, 2024). However, this shift makes efficiency and cost-effectiveness but brings some critical challenges.

The biggest thing is that customer interaction lost emotional intelligence. However, these features are crucial for constructing a strong platform on which high-quality customer service can be established (Rane, Achari, and Choudhary, 2023). Often, customers in the retail coffee sector are looking for a personal, meaningful interaction like a barista recognizes your regular order or strikes up small talk. Though AI-driven CRM can reflect on past purchases and recommend products, it can not replicate human-centric experiences.

The second problem that comes up is cultural sensitivity implemented in Microsoft AI-driven CRM models. Popular amongst the UAE's multicultural society is a diverse consumer base that consists of local Emiratis, expats, and international visitors. Each cultural group has its preferences, communication styles, and customer care expectations. When such culturally nuanced solutions are deployed using generalized datasets that were not trained on these solutions, then the AI algorithms designed may fail to take those into account, and service mismatches or misinterpretation will ensue (Fam et al., 2021). An example would be that an AI-generated standard response might not match up with expected cultural levels regarding tone, formality, or general etiquette and this could negatively impact the customer experience.

The final problem pertains to employee role redefinition and resistance to AI integration. Retail coffee is another sector in which many employees believe that AI-based CRM will take over their jobs, or that the AI will play a number one role in customer service. As a result, this may cause resistance to AI adoption, reluctance to use AI tools, or low engagement among employees (Metz, Ilieş, and Nistor, 2020). Implementation of AI could fall short of achieving its benefits unless there are proper integration strategies and the employees buy into and support it.

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1.3 Significance of the Study

It is important to multiple stakeholders, including academics, business practitioners, policymakers, and technology developers, because of its important contribution to these stakeholders.

Academic Contribution

From an academic point of view, this paper extends the existing literature on AI-driven CRM and service personalization. Previous research has investigated how AI can augment CRM efficiency; however, a dearth of attention has been given to trying to amalgamate AI with human factors in CRM within the UAE coffee retail industry. This gap that this study bridges is its analysis of how the exchange of AI and humanity can be used to improve service quality, cultural adaptability, and customer satisfaction. This research is helpful for academic studies because it look at both human factors and AI in CRM, something that hasn't been explored much together, especially in UAE's coffee sector. Many studies focus either on AI or human side, but not how both can work together in customer management. This paper brings new idea by showing how emotional skills and tech tools can mix to help business connect with customers better. The research use theories like Technology Acceptance and others to understand how people and machines interact in real service place. UAE is full of different cultures, so this research also helps academics see how CRM changes when different people are involved. It also encourages more academic works to study digital tools in emotional service spaces. Future researchers can look at different sectors like hotels or supermarkets using the same idea. The study is also useful in developing business course content, especially in marketing and service management subjects. Overall, this project builds a base for more theories and examples in how

service is changing with digital tools but still needs the human touch. It's a mix of digital study and human psychology, which is quite important for today's academic thinking.

Business and Industry Impact

This research for business practitioners is especially relevant in helping coffee retailers, service industry leaders and others understand how to use the power of AI-driven CRM without losing human connection. Most corporations investing in AI believe that doing so will provide more efficient outcomes, but at the same time struggle with making sure that their automation doesn't alienate their customers. From a strategic perspective, this study discusses the recommendations for crafting an intended AI-human hybrid CRM design that allows for personalization and still utilizes AI data advantages. The study gives useful ideas for coffee shops and other businesses in UAE by showing how both people and AI can be used together in handling customers. In today's fast market, especially for cafes, it's not enough to just give good coffee—you need good service too. The study explain how companies can use tech like chatbots but also keep their workers trained in soft skills like listening and understanding emotions. With more cafes opening in UAE, this research helps businesses to stand out by offering friendly service and also quick, data-driven tools. It shows how AI can support but not replace human workers. The results from this paper can help managers choose right CRM tools, train teams better, and build customer loyalty. Small cafés and new coffee startups can benefit too because they need to grow without losing the personal feeling customers enjoy. It also helps understand where automation works best and where human care is still more needed. This mix of tech and emotional care is the key to keep customers coming back. In short, it helps business people see how to use AI in smart way without making service cold or robotic.

Policymaking and Ethical Considerations

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This study is useful for policymakers and regulatory bodies to think about the implementation of ethical AI in customer service. The more AI is adopted, the more protection for data privacy, bias in AI algorithms, and the right treatment of employees are discussed. The theme of this research arises from the panel discussion platforms to emphasize the relative importance of transparent usage of AI, customer data protection, and culturally sensitive AI design as a guide for policymakers in outlining frameworks for the application of AI-driven CRM in the service sector. The findings of this study brings attention to some important things that policymakers and business leaders should think about. When AI and people work together in CRM, there's questions about data safety, fair job practices, and being respectful of different cultures, which is important in UAE. The paper talks about how rules can be made to make sure AI doesn't become unfair or too powerful. Also, it warns that if everything is automated, some people might lose their jobs, which is not good for the society. So, there should be policies that make sure people are still important in CRM, and workers get trained to use AI tools. This research also says businesses should follow rules that protect customer data and make sure AI decisions are clear and honest. It's also about being fair to workers and not using tech to avoid human jobs. UAE is a country with many cultures and this paper shows why tech systems must be careful not to offend or ignore anyone. Overall, the study is a call for better policy, fairness, and ethics when using AI in customer services. It helps leaders see that AI should help humans, not fully replace them in customer relationships.

Technological Development

This study is based on the identification of the gaps in the ability of AI to provide personalized and culturally adaptive customer experiences for AI developers and CRM technology providers. The findings can help with the future development of AI concerning

emotion recognition, the adaptive learning algorithm, and the human-cantered AI design. These insights can be used by developers to build AI systems that augment human interactions rather than replace them in customer service environments. The insights gathered from this study This research helps tech developers and CRM software makers to improve their systems by knowing what customers and workers really need. The paper shows that AI tools should not only be fast and smart but also understand feelings and cultures, especially in places like UAE with many different people. It says that CRM tools should help workers do their job better, not take everything from them. For example, AI can guess what the customer want, but a real person can still talk kindly and make the person feel welcome. This mix is what today's technology should aim for. The study push tech developers to make CRM systems that let people and AI work side-by-side smoothly. It also support ideas like emotional AI, which means machines that understand if someone is upset or happy. Companies who build these systems can use this study to see what works best in the market. It's not only about making new tech, but making tech that fits real world and real people. In short, the paper help tech industry move towards tools that are smart, human-aware, and ready for complex service jobs like in UAE's coffee shops.

1.4 Research Questions

The exploration of AI and human factors in CRM within the UAE's retail coffee industry necessitates a comprehensive examination of various facets, from customer engagement to cultural sensitivity. The research questions are developed to assist the study in understanding the effects and consequences of blending AI with human-centric CRM approaches. These questions seek to discover strengths, challenges, and opportunities for hybrid CRM models so that the gap between AI and human relationship dynamics in customer service will be comprehended in the extreme.

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- ***"How does the integration of AI and human factors in CRM impact customer engagement in the UAE's retail coffee industry?"***

The first research question focuses on the area of customer interaction and service personalisation. There is a direct relationship between the intention of integration of AI with the expectation of engagement with customers in the coffee retail sector. The customer relationship management process is highly inclined to ensure relationship management that can help the study in exploring its connection with the engagement level of the customers

- ***"What are the key challenges and benefits of implementing a hybrid AI-human CRM model in the UAE's retail coffee sector?"***

The second research question's focus area is operational efficiency. The challenges faced in AI can act as a barrier to enhancing the efficiency of operations and service at the coffee retail shops of the UAE. The customer satisfaction level is also a factor that can be measured by exploring the benefits of AI when implemented with human factors.

- ***"How can coffee retailers in the UAE balance AI-driven automation with a human touch in CRM practices?"***

The research question will explore the balance between AI-driven automation with human touch. Both human touch and technology are vital factors in the experience of the coffee shops for the customers. However, the benefits paved by the technology can outdo the humans. It is important that human touch is maintained due to its exclusivity related to social and emotional touch that cannot be replicated by AI machines. Hence the measurement of the balance is important.

- ***"What role does cultural sensitivity play in AI-integrated CRM strategies in the UAE's coffee industry?"***

The focus area of this particular research question is understanding the role of culture and emotional intelligence in the aspect of service delivery within the coffee retailers of the UAE.

1.5 Research Objectives

This study formulates objectives to answer all the research questions. The objectives are on customer engagement, operational efficiency, cultural sensitivity, and employee roles, which serve to facilitate actionable results with the integration of AI and human factors in CRM.

- ***"To analyse the impact of AI-human CRM integration on customer engagement and satisfaction in the UAE's retail coffee sector"***

  Investigating on the ways in which AI-driven and human-led CRM strategies influence customer loyalty and service experiences in the UAE coffee retail sector.

- ***"To identify key challenges and benefits of hybrid Al-human CRM models"***

  The objective is concerned with the understanding of the operational and financial implications of AI in the dynamics of customer relationship management within the coffee retail sector of the UAE.

- ***"To develop a framework for balancing AI automation and human interaction in CRM practices"***

  The objective deals with the recommendations regarding the development of the coffee retailers on the combination of AI with the human approaches that can be beneficial in terms of enhancing the level of customer engagement and experience that can foster a positive customer relationship management.

- ***"To examine the role of cultural sensitivity in AI-powered CRM systems"***

  The particular objective will help in assessing the ways in which cultural factors affect AI-driven personalisation and the relationships with the customers.

1.6 Limitations, Delimitations, and Assumptions

Limitations

Qualitative research has some limitations inherent in it that are acknowledged in this study. The issue of subjectivity in qualitative data, derived from personal interviews, focus groups, and case studies makes it subjective and may have the potential to be biased. While it lends itself to a very detailed depiction, studies based on this approach are not necessarily generalized. Furthermore, the study has limits to applicability to other industries or geographic locations. Moreover, the findings might become obsolete as time passes and further advancements in technology emerge rapidly.

Another limitation of using this methodology is that the sample size may not be that large as qualitative analysis is very in-depth. Such could narrow down the diversity of perspectives captured, particularly in the world of culturally diverse markets like the UAE. The ending points, however, are based on the participants' reports which can be subject to recall bias — where respondents remember only what they want to remember — or social desirability bias — when the respondent wants to portray themselves in a better light.

Delimitations

The scope and boundaries of the study are delimited. This research is limited to the integration of AI and other forms of human factors within UAE's retail coffee industry practices. Quantitative methods are excluded leaving only qualitative approaches, which comprise interviews, thematic analyses, case studies, and others. The study specifically focuses on the operational and customer engagement aspects of CRM, other than financial performance metrics or market share analysis.

For the study, purposefully, the country under study is UAE due to its specific blend of domestic and foreign-driven consumer demographics that come together to offer perfect settings for looking into the intersection of cultural sensitivity and its application in the field of CRM. The scope of the study is also limited to CRM applications in the customer-facing environment; hence it is outside the scope of studying enterprise (backend) or enterprise CRM systems.

Assumptions

Several assumptions underpin this study. In the first seeing, it posits that human and artificial intelligence factors are complementary to each other in CRM; each of the two plays on different, but not exclusively, dimensions of customer experience and operational effectiveness. Second, the interview and survey process is relatively assumed to be a process of honesty and transparency from the participants either customers or employees who share their experience or their perception of the behaviour.

A second assumption is that the UAE's retail coffee market typifies other service-oriented industries based on customer experience as the key differentiator. It's also assumed that the current level of AI technology concerning CRM applications is enough to significantly influence customer interactions and business processes. Finally, the study also presupposes that cultural sensitivity still has an essence in CRM, especially in a marketplace like that of the UAE.

1.7 Definition of Terms

Understanding key terminologies is essential for comprehending the study's context and focus. The following definitions provide clarity on the central concepts discussed in this research:

Customer Relationship Management

The strategies and practices that are applied by a particular business with the direct intention to retain customers are referred to as customer relationship management (CRM). It involves interaction with the customers through various media directed towards increasing customer service and experience of the customers, allowing the company to drive their sales and growth. CRM is all about how coffee shops handle their relationships with customers, especially in a place like UAE where competition is tough. It includes using systems and strategies to manage customer data and communication to keep people coming back. These cafes try to know what their customers like and create offers or services that fit. It's not just about selling coffee but making people feel good and valued, so they come again. Using both tech and human skills, CRM in coffee shops aims to build strong and lasting customer bonds.

Artificial intelligence in CRM

The application of AI technologies, such as machine learning and data analytics to understand the behaviour of the customers and then manage customers accordingly. The use of AI allows the coffee retailers to automate some tasks for the customer, enhancing speed as well as reliability, which can contribute to the experience of the customers in the coffee shop. AI in CRM basically means using smart tech to help coffee shops understand what their customers want and respond faster. In UAE, a lot of places use tools like chatbots or data analysis to improve service and save time. AI can guess what kind of drinks a customer might like or when they usually visit. It's not meant to fully replace humans but to help them by doing boring tasks quicker. This way, workers can focus on the people part while AI handles the behind-the-scenes stuff.

Human factors in CRM

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It is understood that in the service section, the role of human factors is important. Human factors in CRM encompass the interaction and the efficiency shown by the staff during their interaction with the customers, which can create a positive impact on the brand for the customers. Human factors are the personal touches that staff bring into customer service like being friendly, patient, and knowing how to talk to people. In coffee shops around UAE, these skills really matter because customers are from many backgrounds. While tech can speed things up, it can't replace a smile or a good conversation. These human traits help in making a deeper connection with people and turning them into loyal customers. Good CRM mixes both tech tools and strong people skills to keep customers happy.

Cultural sensitivity

Cultural sensitivity is the awareness of people towards other cultures. It is understood that when cultural sensitivity is taken into place, the services are aligned with the values of the customers, which is well noticed by the customers, making them feel valued and respected. Cultural sensitivity means knowing and respecting different beliefs, habits, or customs that people have. Since UAE has people from many countries, coffee shop workers must understand how to behave in different situations. This could mean using polite language, being careful about certain holidays, or just respecting how someone likes their coffee. Even AI tools used in CRM should be designed to avoid offending anyone. When businesses show cultural awareness, customers feel more comfortable and are more likely to return.

Emotional Intelligence

Emotional intelligence is the ability of an individual to assess the emotions of other individuals and manage their own emotions while interacting with others. In customer relationship management, Emotional intelligence is vital to understand the condition of the

customers and manage them accordingly. Emotional intelligence is about understanding feelings, both yours and the customer's. In coffee shops, this helps staff deal with upset customers or know when someone needs extra attention. It's a key skill for building trust and good vibes. In UAE, where customers expect high-quality service, emotional intelligence can really make a difference. While AI is useful, it can't truly feel emotions, so staff with high emotional awareness fill that gap in CRM. Mixing AI with human care gives the best results.

Predictive Analysis

The ability of machine learning and data analytics to use data and information to predict future outcomes is understood as predictive analysis. The use of predictive analysis allows companies to predict the behaviour of customers and then design their services accordingly. Predictive analysis is when AI looks at past data to try and guess what a customer might do next. For example, if someone buys the same drink every Friday, the system might suggest it again or offer a discount. In UAE coffee stores, this helps them plan better and offer things customers want. It saves time and improves marketing too. When staff use these predictions wisely, it makes service feel more personal even if it's driven by data.

Operational efficiency

The ability of a business to deliver high-standard products and services to its customers is operational efficiency. The area of CRM requires automation of tasks as well as effective human interactions for providing a high level of efficiency. Operational efficiency is about doing things quicker, better, and with less waste. In coffee shops, this can mean faster service, fewer errors, and better use of staff time. AI helps by automating simple tasks like tracking orders or sending out offers. In UAE's busy café scene, working efficiently keeps customers happy and boosts

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profits. Still, human workers are needed to handle tricky situations or give a friendly face to the service. Together, AI and people make operations smoother.

Service personalisation

Service personalisation is tailored-made offers and services for the customers that cater to their needs. It enhances the value of the services and ensures that the customers feel that the services are relevant to their requirements. The services are personalised based on the previous interaction with the customers. This means giving each customer a unique experience based on what they like or have done before. In UAE, where there's a lot of competition, coffee shops try to stand out by remembering what drinks someone likes or what time they usually visit. AI can track this info and suggest offers, but real personalisation also comes from workers remembering faces and names. The goal is to make customers feel special, not just like another order.

AI-driven Automation

AI can be used for the automation of tasks that can ensure that some tasks can be done by machines through higher accuracy, and the pressure on the human workforce can be reduced. The human errors are also reduced through automation. AI-driven automation is when machines or software handle tasks that humans used to do, like replying to basic questions or keeping track of loyalty points. In UAE coffee chains, this helps serve customers faster and reduce pressure on staff. It doesn't mean robots run the place, but that some parts of the job are handled automatically. This leaves workers more time to focus on personal service. When done right, automation makes things more efficient without losing the human touch.

1.8 Background of the Study

UAE Coffee Market Revenues, 2019-2029F ($ Million)

CAGR 2019-22: XX%

CAGR 2023E-29F: XX%

2019 2020 2021 2022 2023E 2024F 2025F 2026F 2027F 2028F 2029F
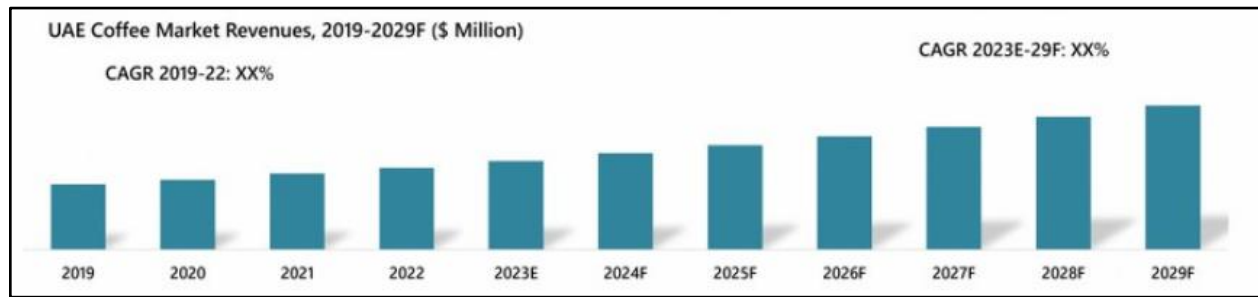
Figure 1.1: UAE Coffee Market Size

(Source: 6Wresearch, 2024)

Due to the increased influence of Western culture, there has been an increased consumption of coffee in the UAE. Between the period of 2023-2029, the coffee market growth rate in the UAE is expected to be 8.4 per cent. The CAGR depicts consolidated growth of the coffee market in the UAE that provided a scope to the retailers in the industry to enhance their services and cash in on the growth opportunity by adhering to technologies such as AI that can contribute to customer retention through effective customer relationship management.

Customer relationship management has moved from the familiar human-driven constraint-based process to the AI-enabled data-based approach which attempts to optimize customer interface, streamline business activities, and retain the customer, (Grewal et al., 2023). The UAE's retail coffee industry showcases the sign of this evolution specifically as it grows at a fast pace with rising demand for premium coffee experiences, a high expatriate population, and expansion of global coffee chains (Statista, 2024). In this current competitive environment, businesses have no choice but to take advantage of the advanced strategies of CRM, incorporating both artificial intelligence efficiency and human touch for personalized service (Engert et al., 2022).

The Evolution of CRM: From Traditional to AI-Enhanced Models

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However, the traditional CRM systems focused on how businesses conducted human-based client services where the business interacted directly with their customers through physical face-to-face interactions. The service-oriented industries such as retail coffee companies (Rane et al., 2023) have been focusing on this approach to emphasize emotional intelligence (EQ), cultural sensitivity, and personalized service. Direct interactions with customers were also important in employees handling the process of remembering customer preferences, as well as allowing for more personalized recommendations, and driving customer loyalty (Metz, Ilieș and Nistor, 2020).

But with the advancement of digital transformation, CRM systems have come to leverage artificial intelligence (AI) to improve operations, automate processes, and generate perception about data (Kumar, Ashraf, and Nadeem, 2024). AI-powered CRM solutions such as chatbots, predictive analytics, and machine learning algorithms enable businesses to conduct behavioral analysis of their customers, personalize marketing campaigns, and optimize loyalty programs (Finn and Downie, 2024). Particularly when it comes to high-volume service industries such as retail coffee, where managing a high customer volume demand per day requires operational efficiency, this shift towards automation has been very useful.

The Role of AI in CRM within the UAE's Retail Coffee Industry

AI CRM technologies are being adopted widely by the UAE's coffee industry for customer enhancement experience, efficiency in business operations and to stay competitive. Companies like Starbucks have used AI in their CRM system to give personalized recommendations, improve inventory management, and reduce customer service through mobile applications and automated ordering systems (Warnick, 2020). These AI capabilities help coffee

retailers predict customer preferences, offer targeted promotions, and reduce wait times, which help to improve customer satisfaction (Ortakci and Seker, 2024).

CRM, however, isn't the end of the line for AI; AI has a lot more to offer for CRM besides automation and efficiency. With machine learning algorithms, businesses can analyse tons of customer data and understand the patterns, preferences, behavioural trends and so to anticipate the customer needs before they arrive at you (Grewal et al., 2023). Specifically, AI is necessary to make the predictive capabilities available within loyalty programs, meaning that we can utilize AI to determine the best kind of incentive across different customer segments and provide a tailored and engaging experience (Castelo et al., 2023).

Challenges of AI-Driven CRM: The Need for Human Factors

Although the uses of AI CRM have obvious advantages, several challenges arise, most notably the loss of human interaction, cultural sensitivity, and emotional intelligence (Blanka, Krumay and Rueckel 2022). However, cultural diversity does matter immensely in consumer behaviour in the UAE, and it is possible that AI systems will not be as capable as customers to provide the personal and culturally sensitive service that customers expect (Fam et al., 2021).

For instance, day to day, different cultural groups have their expectations of service, their way of communicating, and their buying behaviour. My point here is that a standardized AI-driven recommendation system may leave out these nuances and thus end up with misaligned interactions and not high customer satisfaction (Metz, Ilieș, and Nistor, 2020). Furthermore, customers may feel that AI-driven interactions are impersonal which could also result in them decreasing their emotional connection with the brand (Rane, Achari, and Choudhary, 2023).

It is a big concern for AI's incapability to replicate emotional intelligence while interacting with customers. AI does read the customer sentiment from text-based inputs, but it

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cannot fully interpret what is not in text as facial expressions, tone of voice, emotional context, and so on (Hashemi and Bosnjak, 2024). Complex service issues and complaints may lead to customer dissatisfaction due to this limitation and the need for empathy and adaptive problem-solving skills (Chicu et al., 2019).

Hybrid CRM Models: Balancing AI and Human Interaction

However, with these challenges, many of the UAE's retail coffee businesses are moving towards hybrid CRM models that are powered by AI-driven efficiency and human-led personalization. The hybrid approach permits business verticals to robotize the routine jobs — order processing, loyalty program management, and basic customer inquiry — and human involvement in the emotionally entangled and artistically delicate collaboration, for example., (Engert et al., 2022).

Such as the AI can do predictive analytics, automated recommendations, and transaction processing so that humans working in the section can dedicate their time to sales, personalized interactions, and service recoveries (Chatterjee et al., 2021). Among other necessary conditions, this model makes sure that AI-enabled efficiency reaches without degrading the level of customer satisfaction and the level of brand loyalty.

A hybrid CRM strategy is also a way of enhancing rather than detracting from the roles of employees. Although human workers are feared to be replaced by AI, AI can help workers by providing real-time insights, customer history data, and predictive analytics to deliver a more personalized and informed service (Finn and Downie, 2024). Using AI-driven insights, employees can tailor conversations, understand and anticipate customer needs, and recommend things based on culture to make the experience better for the customer.

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Chapter 2: Literature Review

2.1 Introduction

A literature review is a process in which the researcher evaluates the studies that have been conducted. The literature review is done to ensure that the existing knowledge of the current topic of the study can be explored. It forms an integral step in ensuring that the early knowledge of the topic is developed which can assist in the progression of the research. Furthermore, the section allows the researcher to evaluate the current gap in the literature and then explore the same in their current study which can enhance the significance of the study. In this section of the research, existing literature regarding the impact of AI-human CRM integration on customer engagement and satisfaction. Furthermore, the section will explore the key challenges and benefits of AI-human CRM models in regard to customer relationship management by considering the existing studies. The framework that can be used to balance AI automation and human integration in CRM practices will be discussed. The role of cultural sensitivity will also be explained in this segment of this research. In this segment, a theoretical perspective will be presented to develop a more detailed understanding of the research.

Changes in consumer needs alongside technology have quickly changed the retail coffee industry in the UAE. Transforming from traditional human sales activities to AI-driven CRM practices has become the norm. This is due to the increased necessity for personalized experience, precision in operations, and competitiveness market complementization, particularly in oversaturated markets. Applications of AI technology for CRM purposes involve the use of chatbots, predictive analytics, and other machine learning models. These applications enhance customer engagement by providing automated recommendations to customers in real-time and automating service delivery processes.

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2.2 Review of Existing Literature

With time, Artificial Intelligence has been integrating with our lives more deeply. It can be said to be improving and easing our lives on various fronts, be they personal or professional. In the business, it's becoming essential to use AI to be more efficient and competitive in the market. Nowadays, customer experience is the driving force of any business product can be worth it but a bad customer experience can ruin the business in the long term. So, adopting new tech to improve the customer experience and creating a pleasurable experience becomes very important. Customer expectations are evolving with time so integrating AI-based CRM (Customer Relationship Management) becomes important to optimise the experience, providing personalised recommendations to customers, and analysing customer data to provide better services are a few of the important features of AI integration. The coffee retail sector of the UAE is highly competitive, and business differentiation is vital to customer experience to stay in the market, combining AI-driven CRM solutions and priceless human interaction.

Role Analysis

Artificial Intelligence can be integrated with CRM in multiple ways in the coffee retail sector to improve and facilitate business to be efficient and streamline in serving customers. AI being an umbrella term for multiple functionalities, can be integrated into various stages to provide customers a fast, personalised and satisfactory experience.

Predictive Analysis

Using AI-driven data analysis to predict user choices and preferences aims to provide a more personalised experience to the customer which makes the customer feel more comfortable at the cafe (Reis, 2024). There's a lot of data that can be used to analyse customer behaviour and purchase habits that can provide an accurate representation of how much and often a customer

buys coffee. This data can't be analysed or used without any proper qualifications or skills, this gap is filled using AI-driven CRM to predict the behaviour of customers so businesses can make proper decisions regarding the customer's involving AI doesn't mean removing the humans from the equation of human intervention will be required to understand the results provided the data and take proper steps to get expected outcomes. Without proper context and goals, the data analysis will be just a bunch of numbers; to make the best out of it humans will be required to implement things. UAE is a wealthy country with people with good incomes who expect the best experience from the products or services they buy, so integrating AI-based CRM adds a personalisation touch to make it even better.

Predictive analysis is one big tools in CRM that use data, algorithms and machine learning for guess what customer may do in future. Inside UAE coffee industry, it helping café and coffee shop to know customer behavior before it happens. In market where lot of people expect quick service and good experience, predictive analysis make strong advantage (Attaran & Attaran, 2018). When mix with human thinking, it make CRM more useful and close to what customer actually feel.

This tool use data like what people buy, when they come, how they pay and even what they post online. In coffee place, it can guess what drink a person like, what time they usually come or if they not happy lately. AI software find these patterns fast and send it to staff, so they act fast. Like, if someone not come for two weeks, system can send small offer or message to bring them back. So workers no need to search old records, AI already help.

But in UAE, people is from many cultures and backrounds. That's why AI must work together with human. Machine can find pattern, but not understand culture or feelings good as humans. Maybe AI offer drink promotion in Ramadan, but a staff knows customer might fasting.

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That small human touch make big difference. So when AI and staff work together, it better for respect and personal connection.

Predictive analysis also helps with stock and staff planning (Al Bashar, Taher & Johura, 2024). It can guess what item will sell more in hot days or busy times. If AI say iced drinks get popular in summer morning, staff can get ready. This avoid long wait and waste. Still, people is needed to take final decisions, like when holiday come or something happen that AI didn't learn before. Machine help but human make the smart choice in real time.

There are also problem with predictive use. If business depend only on machine, it may ignore emotion or special things. Like someone always order latte but suddenly want tea cause sick. AI maybe still suggest latte, which feel not personal. That why staff need to notice this and ask kindly. Human skills like listening, smiling, caring cannot be replaced by just data. To finish, predictive analysis is strong tool for coffee business in UAE to know customer better and make service faster. But using it alone is not enough. It need mix with human sense, emotion and cultural care to work properly. When AI and people both doing their job, CRM become more smart and more human. This help keep customer come back in market that always changing and full of choice.

Automation

With the rise of technology, many routine or repetitive tasks have been automated by AI freeing human employees to more important tasks that need a human touch like serving the customer, and human interactions. Being AI integrated into CRM solutions employees don't need to update each data of customers personally, scheduling the campaigns for business.

Automation is becoming more important part of Customer Relationship Management (CRM) (Agnihotri, 2021). With so much customer coming every day, and people wanting fast

service, automation help business to respond quicker, save time, and give better service. In UAE retail coffee sector, where customer have high expectation and competition is strong, automation with AI help to do many task automatic while humans focus on personal care.

AI-driven automation can do things like sending messages, handling orders, and even reply to customers by chatbot. This make communication faster and more consistent (Kunze et al., 2019). Like, when customer order same drink every morning, system can suggest it before they ask. Or if someone's birthday is coming, system can send discount offer. These kind of action happen without human do anything, so it save time and make customer feel noticed. In UAE, where customer is from many different cultures, automation need to be smart and respectful. Just sending auto message is not enough. That's where human factor still important. Machine can send reminder or offer, but staff must know how to follow up in nice and friendly way. Sometime, customer prefer face-to-face talk, and automation can't replace that. So using AI tools with human emotional skill make CRM stronger.

Automation also help with tasks like collecting feedback, recording complaint, or checking if service was good. This give business data to understand what customer like or not. In coffee shops, feedback can show if people like a new item or not, or if waiting time is too long. AI tools collect this fast and give report to manager. But again, it need human to make sense of it and take right action.

One good thing is automation run 24/7. It don't get tired or make mistakes like people sometimes do. If customer ask something late at night on app, chatbot can answer. This kind of round-the-clock service improve customer satisfaction. But, sometimes chatbot give wrong or basic answer, and that can make customer upset. So human support still need for complex question or emotional issues.

Another challenge is over-automation. If business depend too much on system, customer might feel like talking to robot. That can break trust. In UAE where personal touch is valued, coffee business must keep balance. Staff must be trained how to work with AI tools, not feel replaced by them. Training also help workers feel confident and use automation in right way. To conclude, automation in CRM for UAE coffee shops give many benefits like speed, accuracy and better service tracking. But its power grow more when it used along human skills like care, culture understanding and emotional response. AI do the task, but human do the connection. That's what make CRM more strong, more loyal, and more suited to the UAE market where people expect both high tech and warm service

Virtual assistance

Recently with the innovation of bots like ChatGPT and Claude, virtual assistance has a huge leap to serve customer queries without any human intervention, reducing human errors and providing 24/7 support to customers increasing customer satisfaction with the business. This virtual assistance can solve queries of multiple customers at once making it more efficient compared to human alternatives. With the help of virtual assistance users can ask for the location menu and other useful data that a customer will need. It may look like virtual assistance can replace humans completely, but the query of the customer is very dynamic and this virtual assistance can help to some extent to help the users with more advanced queries and questions they have only humans can help them. So, both are required to provide optimum functioning of a cafe business.

Virtual assistants, powered by Artificial Intelligence (AI), have become increasingly important in enhancing Customer Relationship Management (CRM) practices. The UAE's retail coffee sector, with its fast-growing tech environment and diverse customer base, stands to gain

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significantly from integrating virtual assistants into CRM strategies. These AI-driven tools are designed to interact with customers in real-time, handle inquiries, and offer personalized services. When combined with the human element, they can transform the way businesses manage customer interactions.

One of the primary advantages of virtual assistants in CRM is their ability to offer instantaneous responses to customer queries. Coffee shops in the UAE, with their high volume of customers, can benefit from virtual assistants that handle routine tasks such as processing orders, answering FAQs, and making personalized recommendations. According to Chatterjee et al. (2021), virtual assistants not only improve the speed of service but also enhance customer satisfaction by providing quick, accurate, and 24/7 support. For instance, a customer ordering their usual coffee through a virtual assistant is likely to receive a prompt and efficient experience, reducing wait times and enhancing customer loyalty.

Furthermore, personalization is a key feature of virtual assistants. By leveraging customer data, AI systems can provide tailored experiences, such as suggesting drinks based on a customer's past preferences or offering personalized promotions. For example, a virtual assistant could remind a customer of a special offer on their favorite coffee flavor, or offer a discount for a loyalty program member. Studies by Ghosh et al. (2020) suggest that when these virtual assistants work alongside human employees, they can deliver a seamless experience as AI handles repetitive tasks, while human staff focus on the emotional connection with the customer. This division of labor ensures that CRM is efficient and customer-centric.

However, the integration of virtual assistants is not without its challenges. One key issue is the lack of emotional intelligence that virtual assistants may exhibit, which can hinder the personalization of customer service. While AI is proficient at handling structured tasks, it often

falls short in understanding the emotional state or specific needs of a customer (Parasuraman & Colby, 2015). In the culturally diverse UAE market, where emotional connections play a significant role in consumer behavior, virtual assistants might struggle to deliver the level of empathy that human employees can offer. This is particularly relevant in the retail coffee sector, where customers often seek a sense of connection with the barista or staff. Moreover, trust and acceptance of AI technologies can vary, especially in cultures like the UAE, where personal relationships are highly valued. As noted by Arar et al. (2021) customers in the UAE may feel hesitant to interact with virtual assistants, preferring human interaction, especially when making personal requests. Businesses must therefore strike a balance between automation and the human touch, ensuring that virtual assistants complement, rather than replace, human employees.

In conclusion, virtual assistants represent a promising technology in the integration of AI and human elements in CRM practices, particularly in the UAE's retail coffee sector. They offer benefits such as increased efficiency, enhanced personalization, and round-the-clock service. However, for virtual assistants to be fully effective, they must work in tandem with human staff who bring empathy, cultural sensitivity, and emotional intelligence into the customer experience. Future research should explore how these technologies can be further optimized to address cultural nuances and emotional connections, ensuring a balanced and holistic CRM approach.

Recommendation Engine

When AI is integrated with CRM, it includes and recommendation engine that helps the business customise the service and products they provide to customers. This engine is specially designed to provide a personal experience to everyone Depending on the customer this engine keeps track of the customer's purchases so businesses can prepare for the specific products and services an individual may require. The personal touch given to customers affects the very

positively. The customer feels important, and they tend to return. This makes customers loyal to the brand with all these touches. When keeping track of customer purchase behaviour or taste or favourable flavour by customers businesses can minimize waste, when a business knows which product to keep in stock according to demand customers usually don't need to AI wait for long and products don't get out of stock if a business follows the data outcomes carefully contributing to the overall efficiency.

Human Factor

Human touch will always be required in customer service; no matter how advanced technology gets; human intervention will be needed to keep things in check. AI-integrated CRM may outdo humans in analysing data, but in solving dynamic tasks and serving the customers accurately, the AI can't replace human interactions that the customer requires to solve queries.

AI can't replace the human staff to serve the customers accurately. Customers may order the products beforehand online, but their coffee will be prepared and served by humans to keep the order correct and proper for customers. The proper mix of both technology and human warmth is required to not being uncomfortable by just using technology and avoiding any mishap or technical error. To give customers a comfortable environment, human staff becomes important AI can't replicate human warmth and connection (Omar and Rashid, 2023). Customers not only buy products and services from a business or brand they form a connection without a human face that connection might not be there. In social settings like this interaction, people, situations and conditions won't always be routine. any time there are situation that calls for some unique creative solutions or human judgments to get out of it which AI can't tackle as efficiently as humans can. As discussed earlier even using (customer data, segment analysis, and purchase data of customers human interpretation of data is needed, and a proper plan should be devised by

humans to make the most out of the data. So human intervention or involvement is still a critical part of CRM in coffee retail sectors.

Benefits

AI integration comes with various benefits for business when executed properly it can help the business to become more efficient, profitable and loved by people. When data is used in the right way in AI-integrated CRM it gets easy to predict what customers will like and what to change to be more customer-friendly so customers can have the best a business can give. Here are some benefits a AI-integrated CRM have:

Operational Efficiency

Automating tasks like scheduling marketing campaigns for customers, customer segmentation etc data analysis tasks and other routine tasks are taken care of by AI CRM, saving cost for the business and time for staff. Shifting routine tasks from humans to AI CRM staff can provide better services to customers when not loaded with much work, and staff doesn't get overworked. With less load staff doesn't get that stressed and caters for the customers more pleasantly and with mindfulness. This cuts costs for businesses when routine work gets streamlined and not much human staff is required.

Operational efficiency refers to the ability of a business to deliver its services in a cost-effective and time-efficient manner while maintaining a high standard of quality (Cheng, Goh & Kim, 2018). In the context of Customer Relationship Management (CRM) in the UAE's retail coffee sector, operational efficiency is a key factor in ensuring businesses meet the growing expectations of customers while managing costs effectively. The integration of Artificial Intelligence (AI) and human capabilities in CRM practices has shown great promise in improving operational efficiency, particularly in fast-paced environments like coffee shops.

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One of the major advantages of AI-driven CRM systems is their ability to automate repetitive tasks, which significantly reduces the time and effort required by human staff. According to automation helps streamline operations, allowing employees to focus on more critical aspects of customer service, such as building relationships and providing personalized experiences (Boda & Immaneni, 2019). In the coffee industry, AI tools like automated ordering systems, chatbots, and inventory management software help speed up processes like taking orders, restocking inventory, and handling customer inquiries. By reducing the workload on employees, businesses can lower operational costs and improve overall efficiency.

AI-driven systems can also enhance decision-making in operational processes. With access to vast amounts of data, AI tools can analyze customer behavior, sales trends, and inventory levels in real-time, providing valuable insights to managers. For example, AI can predict which products are likely to sell more during specific times of the day, allowing coffee shops to prepare in advance, reducing waste, and ensuring products are always available. As illustrated by Saleh et al. (2024) that predictive analysis and forecasting are key elements that contribute to operational optimization. This level of proactive decision-making ensures that resources are allocated efficiently, and services are delivered without delays.

Moreover, AI-driven automation in CRM systems can improve customer service response times, which directly affects operational efficiency. Virtual assistants, for example, can handle customer inquiries and order placements at any time, freeing up human employees to focus on higher-value tasks. This reduces wait times and enhances customer satisfaction, which in turn drives operational efficiency. For instance, a coffee shop in the UAE can use AI-powered virtual assistants to process orders, recommend personalized drinks, and even resolve customer

issues without involving staff in every interaction. This minimizes human errors and allows businesses to serve more customers with fewer resources.

However, while AI can greatly enhance operational efficiency, it is not without challenges. A key issue is ensuring that AI systems do not lead to over-reliance on automation, which could reduce the personal touch that is often valued in customer service, especially in a culturally rich and diverse market like the UAE. As Parasuraman & Colby (2015) point out, the integration of human factors is critical to ensuring that the automation process is balanced with human empathy and cultural understanding. Therefore, businesses must strike a balance between AI-driven efficiency and the human element of customer service to ensure a high-quality experience.

In conclusion, integrating AI and human factors into CRM systems in the retail coffee sector of the UAE offers significant benefits in terms of operational efficiency. Automation streamlines repetitive tasks, reduces costs, and improves decision-making processes, all of which contribute to a smoother and more cost-effective operation. However, businesses must be cautious about over-relying on AI, as the human touch remains essential for delivering personalized and culturally sensitive customer experiences. Further research is needed to understand how AI and human collaboration can be optimized for maximum operational efficiency in the retail coffee sector.

Data Driven

AI-integrated CRM empowers businesses to use their data to make the right decisions for their business (Prasanth et al. 2023). Finding the correct customer segment to target for marketing campaigns helps get better results in marketing. Keeping track of customer preferences on flavours they like according to season, and occasion helps the business procure

stock in an efficient way which minimizes the wastage of products. This tech came as a revolution for businesses to study customer behaviour using data when executed in a correct way it gives businesses improve recursively on their all shortcomings. Pulling customers with the right offering according to their taste, providing seasonal offers so they buy more. Data used in the right way can turn the business around

Scalability

Routine tasks getting automated by AI-integrated CRM helps businesses focus on more important tasks like scaling the business and providing better services. Operations being streamlined and automated, businesses can open many outlets depending on the demand of customers and business needs. As operations got automated, there's not many caveats other than infrastructure to start an outlet. To gain customers AI AI-integrated CRM gives data on which type of customers and in which area has a high demand for coffee, depending on that, businesses can gain a lot of customers and scale their business easily.

Competitive Advantage

Keeping up with new technologies to improve business efficiency keeps the business competitive (Saura et al. 2022). It helps to keep up with the competition and gain new customers. The blend of tech and human touch does wonders for the business, solidifying the customer's relationship with the brand and making them loyal to the brand. But just integrating new tech like AI-integrated CRM without any proper goal to achieve will backfire and can cost a lot.

Challenges

Integrating AI into CRM comes with its own set of challenges; staff need to train to work with new technology, so it doesn't feel like some alien technology, and operations don't hamper while working. Not every business needs to implement these into their system, like small

businesses that do not know their requirements. There should be certain goals in mind because sometimes it can be overkill and over-complication of operations which will lead to the opposite of efficiency.

Correct Data

When collecting data for analysis and feeding it into AI CRM for customer management, some data can be redundant or useless, and when used, this data can give incorrect results or analysis that will lead to wrong decisions by the business. It's very important to train the employees and staff properly to troubleshoot or find these issues. Collecting data is first for data analysis and it should be correct and consistent across the channels it's been collected from. Inconsistent data in AI CRM may cause inaccurate data and predictions.

Balance

Balance of automation and human touch should be maintained so business doesn't lose its human warmth and connection. Automation with human interactivity is important for customer service providing empathy and personalisation which makes customers loyal to the brand. Over-automation of tasks creates impersonal services that won't be sufficient for every type of customer some customers are overly emotional and without human interaction might not react the right way. AI CRM should be limited only to routine, bad, recurring tasks that don't involve many human interactions.

Cost and Complexity

Introducing new technology to business incurs expenses, time and complexities (Chammassian & Sabatier, 2020). Integrating new methods means having new ways to operate the business, staff need to be trained and given time to get used to it. Not every time this new technology results in positive results when implemented without any goals, it can lead to wasted

resources of the business and unnecessary operational complexity. Small and medium-sized businesses should properly imagine their goal before integrating these complex machines into their operations, because it can cost a lot to train staff to work in this tech.

Ethics

Not all data can be used to train data proper rules and guidelines should be implemented so businesses don't breach the privacy of users. There should be transparency in what data is being used by businesses to customers to build trust with them. Customer data in the wrong hands can cause issues to safeguard this business should follow the guidelines given by the government and have a privacy policy that mentions the way data can be used for customers to avoid sharing this data with third parties. Securing data is also another factor businesses should take care of its security.

Every business decision comes with its own benefits and drawbacks. To remain profitable and competitive, certain strategic choices are essential, one of them being the integration of AI into CRM systems. When implemented effectively, AI-powered CRM can operate like a miracle machine, transforming customer engagement and boosting efficiency. Catching up with tech is important for business, considering the UAE's competitive market it gets more important to catch the attention of customers to have a profitable business. Coffee retail stores are more about environment and aesthetics, catching trends that customers value more retail stores can serve the customers better

Impact of AI-human CRM integration on customer engagement and satisfaction

In the current business environment, it is common knowledge that technology has been integral in every aspect. Businesses have utilised technology for a wide range of purposes which has yielded results. The aspect of customer relationship management is not different and there is

a strong scope for businesses to ensure that technologies such as AI in integrated along with human factors especially in the retail coffee sector to retain customers and drive business growth. Davenport et al., (2020), stated that the use of AI can be vital in collecting and monitoring customer data. This can enable understanding regarding the behaviour and preferences of the customers. It is seen that when businesses are aware of the preferences and the behaviour of the customers they can transform and align their practices accordingly. The knowledge gained from the AI system also assists the staff in delivering the services in accordance with the customer dynamics. AI is also noted to allow companies to implement technologies such as chatbots which can be available all the time. The chatbots offer automated responses which are quick and can play a vital role in enhancing the experience of the customers. Furthermore, the collected data can be used to develop personalised recommendations which reduces the time of exploration of the customers. Meeting the precise needs of the customers will allow the brands to enhance their brand image while developing loyalty among the customers towards the brand. Another study by Bock et al., (2020) has shown that the hybrid model where AI is integrated with human agents provides the highest level of customer support. It is understood that the use of AI allows the collection of information and insights that can reveal customers' personal preferences. Human agents can be vital in ensuring that the emotional intelligence factors in the customer relationship management process are maintained.

The combination of emotional intelligence along with the use of automation creates premises where the issues of the customers are well-solved and addressed creating a high level of efficiency for the businesses managing relationships with the customers. The study has opted for the use of service theories which have been interpreted in the context of the services provided by the businesses. The findings of the study have shown that when AI is integrated with human

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agents it can develop a high level of customer satisfaction. Furthermore, this can help businesses manage customer relationships. In another study, Kietzmann et al., (2018), show that the use of AI can enhance marketing effectiveness. The use of AI allows automation through which chatbots can reply to the queries of customers instantly. It is understood that the role of customer service is important in developing a positive relationship with the business. The use of AI allows automation which enhances the relationship management practices by reducing wait times of the customers for solving their queries. Besides, since automation is available all the time it provides more convenient ways of dealing with customers at different times without depending on human limitations. Bokonda et al., (2020) mention that AI used as a predictive model. The use of AI allows businesses to collect data and information about their behaviour and practices.

AI-powered CRM increases efficiency through automated responses, forecasting consumer needs, and personalization by anticipating consumers' needs. Human intervention promotes emotional intelligence and assists in trust-building. Balance must be achieved between

AI-powered automation with a human touch in a bid to maintain customer loyalty.

Personalization and Enhancement of Customer Engagement

Davenport et al. (2020) have suggested that coffee traders tailor product recommendations for consumers based on location, preferences, and purchasing habits, by combining predictive analytics with machine learning techniques. AI-driven CRM technologies enhance convenience through common question management, real-time answer facilitation, and general customer service efficiency (Huang & Rust, 2018). As an example of the coffee retail industry change in customer engagement because of AI, Starbucks uses AI to personalize its offerings and make the use of its services easier, through their AI technology called Deep Brew. A reliance on machines could deprive both parties from empathy and negatively impact the

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consumer experience. AI-powered predictive insights (Mende et al., 2019). Notwithstanding, human contact remains essential for tackling challenging problems, managing complaints, and establishing long-lasting brand affinity. A hybrid approach that utilizes AI for automation while reserving human involvement at critical touchpoints follows a strategy that fosters engagement and boosts consumer confidence.

The Impact of AI on Customer Loyalty and Satisfaction

The perceived personalization, responsiveness and service quality directly influences customer happiness. According to Koc (2019), AI-driven CRM systems enhance reliability and responsiveness which decreases service delivery errors. Thereby even facilitating smooth Omni channel interactions from mobile applications to in-store digital ordering in the United Arab Emirates, where customers demand first-rate experiences.

Despite these advantages, AI cannot replace human empathy and problem-solving completely. For delicate conversations, chatbots and AI based recommendations may not completely get client emotions and it could lead to unhappy customers, as seen in studies. That said, there are aspects of human intentions and problem-solving that cannot be replaced. In Subject Sensitive Exchanges, chatbots, store robots, and AI based suggestions may not fully understand to client dictums and can frustrate customers as revealed in studies. On the converse, also mentioned by Huang & Rust (2018), the combination of AI and human agents for co-creation leads to enhanced service accuracy while personalizing human interaction which will increase customer satisfaction and brand loyalty.
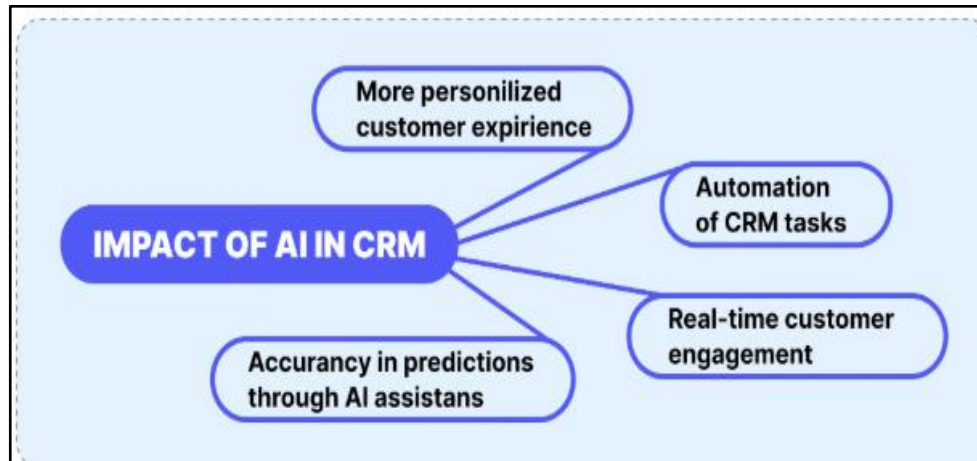
Figure 2.1: The Impact of AI on Customer Loyalty and Satisfaction

(Source: Koc, 2019)

Key Challenges and Benefits of AI-Human CRM Models

A study by Gursoy et al., (2019) has stated that there are certain challenges in the integration of AI in CRM models. The study collected data from the customers and then tested the AIDUA model. The survey method was used to collect the data from the customers. The findings of the study reflected that AI is a technological medium which cannot replace humans. The factors of emotional intelligence and empathy cannot be replicated by the automated technologies of AI. The aspect of CMR is wholly dependent on empathy and understanding which is a major weakness of AI. Hence, the study has identified that the use of AI can be unsuitable for complex interactions with customers that may require high emotional intelligence. This can act as a challenge for retail coffee businesses in the UAE in the AI-human CRM models. In a similar context, a study by Huang & Rust (2021), has shown that the general perception of the customers is inclined towards interacting with the people. The study has showcased that human involvement provides a sense of authenticity to the customers. Besides, humans can be estimated to be more flexible in interacting with customers requires high social skills. In complex circumstances which are rare, the role of automated services cannot be relied

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on limiting the efficiency of AI technologies in customer relationship management. However, human interaction can be more emphatic and understanding which can be more effective in dealing with customers that are frustrated. From the above discussion, the lack of empathy and emotional intelligence among the AI technologies is the major challenge related to the implementation of the AI-human CRM model. Mixing Artificial Intelligence (AI) with human efforts in CRM is changing how business deal with customers, especially in retail coffee industry like in UAE. This mix approach is getting attention because it help companies deliver both fast service and emotional care to customers in diverse market. Past studies shows that when AI and people work together in CRM, it brings both positive outcomes and also some problems, mostly in service industries where customer interaction is important.

One big benefit is that AI help with personalized service. As Khneyzer, Boustany & Dagher (2024), explain, machines can scan big amounts of customer data and create special offers, suggest products or make loyalty programs based on what each person like. In coffee shops in UAE, where many people want their drinks made in a specific way, this helps a lot. When staff with emotional skills work together with AI tools, service becomes both quick and friendly (Naslednikov, 2024). Efficiency is another strong point. Things like chatbots, automatic order systems, and mood detection can make work faster and reduce mistakes. Saviano et al. (2023) say that using AI makes back-office and customer-facing tasks smoother. This is useful in busy coffee places, where fast but good service matters. It allow AI to take care of data, while humans do the talking and engaging.

Still, there is many challenges in making this model work well. One issue is that not all workers are ready to use AI. In UAE, many staff come from different countries and may not be good with new tech or feel unsure working with machines. Huang and Rust (2021) also

mentioned that some employees are scared of AI replacing them or don't trust what AI suggests. In coffee retail, where talking to customers is key, this fear can affect work. Privacy and ethics are also big concerns. Since AI tools needs a lot of customer info, people worry about how their data is being used or if the machine is making fair decisions (Zuboff, 2019). UAE is working on improving data laws, so businesses must be careful to follow rules and not misuse customer trust.

Culture is another thing that makes AI tricky. Machine can't always understand customer feelings or local habits. Ahmed (2018) said that culture matters a lot in Middle East when it comes to customer experience. If AI is not built with local knowledge or workers don't act with cultural care, the CRM service might feel cold or wrong. To sum up, AI and humans working together in CRM bring many good things like faster service and personal touch. But it only works well when companies also deal with training, ethics, and culture. UAE's coffee sector is a great place to study this, since it has lots of different people and fast-growing tech.

The Retail Coffee Sector's AI-Human CRM Integration Challenges

Apart from the productivity increases, there are challenges in implementing AI, including data protection, costs of developing solutions, and customer hesitation toward automation. When AI takes care of its customers' personal data then customers might be worried about possible abuse and security slip-ups (Ikwuanusi, Adepoju & Odionu, 2023). To safeguard customers' trust, shops in the UAE must adhere to data protection laws in the country such as, the UAE Personal Data Protection Law, and ensure transparency in communications driven by AI Another downside is that smaller coffee shops may not have enough resources to implement AI-driven CRM solutions. As stated by Salih, Tarhini & Acikgoz (2025), although large organizations such as Starbucks and Costa Coffee have successfully integrated Artificial Intelligence (AI), but the smaller family organizations will find it hard to implement this as they

lack financial and technological resources. In addition, as older demographics are shown to be reluctant to AI (Rjsé, Jylkäs & Miettinen, 2021), maintaining the human touchpoint in CRM is all the more necessary to avoid exclusion.

Future Patterns and Consequences

Further AI and human collaboration is likely in store for CRM in the UAE's coffee shop sector. Advancements in sentiment analysis and natural language processing (NLP) will improve these automated interactions as AI also becomes better at understanding customer emotions. Also, AI driven CRM will play a core role behind sustainability projects such as reducing waste using automated inventory management and forecasting demand with predictive analytics. Artificial intelligence in retail must find a balanced road to enable it to support human relationships instead of supplanting them. The role of training in not only just providing balance between customer support system efficiency and empathy but in also marrying the two, becomes pivotal in this collaboration to bring staff alongside AI tools (Davenport et al. 2020). Total integration of AI with a human factor in your CRM must really depend on how well technology adoption mixes in with customer centred principles.

2.3 Key Challenges and Benefits of AI-Human CRM Models

The artificial intelligence in customer relationship management have completely transformed service delivery in the retail coffee sector. The human aspects contribute emotional strength, trust, and flexibility into the equation, whereas artificial intelligence-based CRM enhances personalization, efficiency, and predictive analysis.AI human CRM models with its high dependence on customer experience within the competitive nature of UAE coffee retail sector come with their own possibilities and challenges. In this section, a comparative analysis of

the advantages and challenges of leveraging AI human CRM models in the retail coffee sector is given.

Benefits of AI-Human CRM Models

Improved Customization and Interaction with Customers

AI-powered CRM systems use big data and machine learning to analyse consumer behaviour and help companies offer personalised promotions and recommendations. There may represent particular lifestyle choices among consumers in the United Arab Emirates, and AI-powered solutions help merchants tailor experiences according to these different consumers. Starbucks leverages its AI known as Deep Brew to provide personalized beverage recommendations based on predictive analytics, enhancing customer satisfaction and retention (Yang, 2024). However, as Shin & Cheng (2023) suggest, the emotional intelligence needs for customer interactions, particularly around service recovery issues, cannot be offloaded to AI alone. Adding layers of insight into emotions acknowledged and experienced creates a higher level of human connection which has the effect of increasing engagement with and trust in the brand.

Efficiency in Operations and Cost Cutting

AI-powered CRM models automate order processing, chat assistance, inventory management and other repetitive operations to attain maximum operational efficiency. AI chatbots and other automated customer care solutions handle high volumes of customer inquiries, reducing response time and increasing the availability of services (Tuğer, 2024). This enhances overall productivity by allowing human workers to focus more on complex service issues. Moreover, AI-based CRM reduces workforce management costs. Due to automation, AI systems can take over repetitive tasks, and as a result, large customer care staff are not always

necessary. This is particularly valuable in the costly retail market of the UAE, were profit rests on efficiency in operations.

Making Decisions Based on Data

AI interprets sales trends, customer behaviour patterns, and service performance to provide companies with practical insights. This data-driven strategy enables retailers to make informed choices regarding marketing strategies, inventory forecasting, and customer service enhancements (Lemon & Verhoef, 2016). AI-powered predictive analytics helps coffee merchants anticipate changes in demand, letting them manage their supply chains better and reduce waste. An increase in productivity through AI-powered decision-making is also dependent on the quality of data input that ensures the proper functioning of these models. Human oversight is necessary to contextualize insights and align them with company goals.
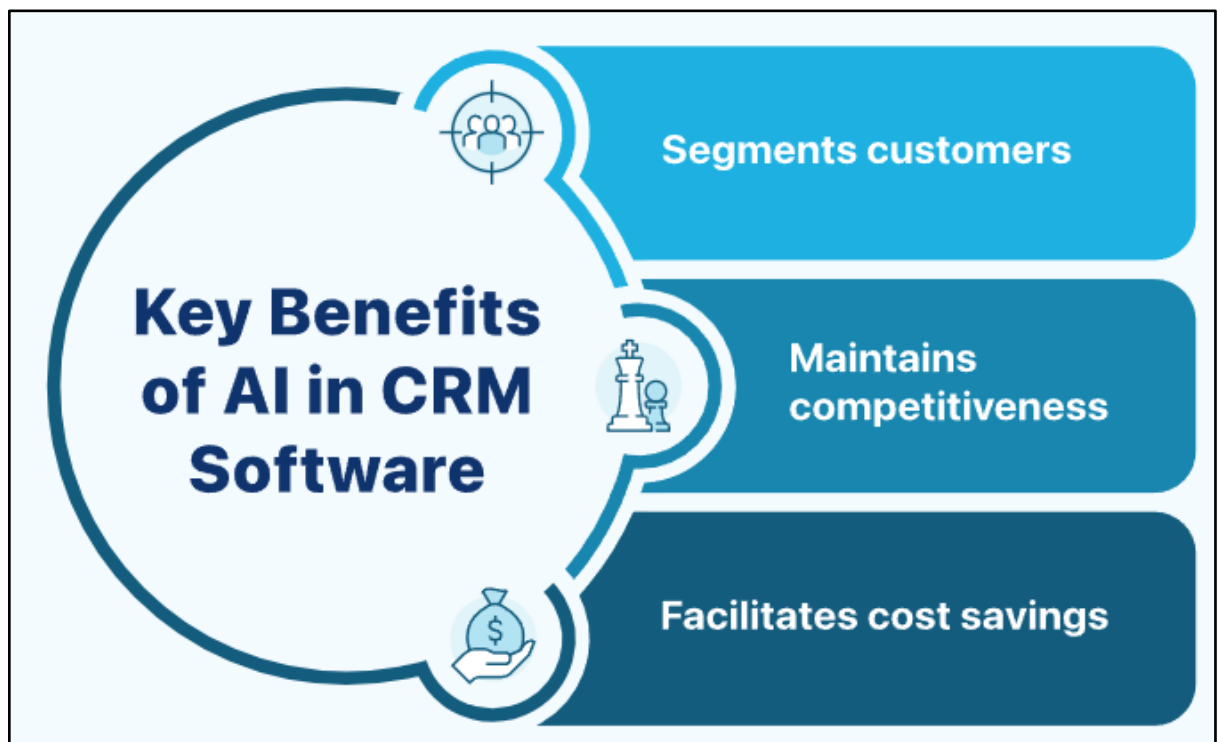

Figure 2.2: Benefits of AI-Human CRM Models

(Source: Lemon & Verhoef, 2016)

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Challenges of AI-Human CRM Models

Data Security and Privacy Issues

That said, the greatest hurdle in integrating AI with human CRM is data privacy. Given that AI-driven CRM systems require enormous volumes of customer data to be processed in order to run effectively, this becomes a challenge in terms of data security and customer trust (Choudhury, Phatak & Joshi, 2023). The UAE imposes strict data protection legislation regulating the collection and processing of personal data and businesses are required to have security measures in place. A serious data breach can disrupt the effectiveness of AI-driven CRM solutions by damaging a retailer's brand image and customer trust. To mitigate these threats, companies must adopt encryption software, open data laws, and ethical artificial intelligence principles.

Costs of Implementation and Complexity of Technology

AI-supporting CRM systems entail exorbitant initial investments and require advanced technological infrastructure, expertise, and updates of the systems (Shankar, 2022). While coffee giants Starbucks and Costa Coffee have successfully utilised AI tools, smaller retailers are facing technical and budgeting hurdles. For the AI to be effective, employees need to be trained to be able to work hand in hand with AI, which is another aspect of staff training required for AI implementation. The UAE's lack of qualified AI specialists may hinder the adoption process and incur more training costs and transition time (Stade et al., 2023).

Consumer Opposition to AI Communication

According to Lv, Qiu & Cho (2024), even with the benefits of AI-enabled customer service, some customers still desire human interaction, particularly for complex inquiries or scenarios involving service recovery. Complete reliance on AI could be delivered in a market

like the UAE which is culturally diverse and where personal service is valued, potentially leading to dissatisfaction. Even though AI performs well with jobs low on the intelligence spectrum, customers get annoyed when AI fails to understand context or emotional cues. To resolve this and maintain customer satisfaction demands hybrid CRM platforms that judiciously blend AI's efficiency with humanity's emotional acuity.

Bias in AI Decision-Making process and barriers with ethics

During the training stage AI datasets can have their own embedded discrimination implied prejudices, whether knowingly or not, later being reproduced in automated decisions which influence client communications. Under such circumstances, customers may be treated unfairly based on their intrinsic attributes, which jeopardizes the credibility of a brand.

An AI system trained on data that does not represent the diverse characteristics of a retailer's audience may inherently privilege some segments over others. This calls for stricter monitoring to ensure equity in customer treatment. Some others might face complex situations trying to get assistance from an AI assistant whose perception is limited or distorted. It is thus incumbent upon retailers to guard against bias and ensure that their AI treats their consumers equitably and that algorithms are duly designed to remain free of bias and properly updated to reflect changes in the served customers.
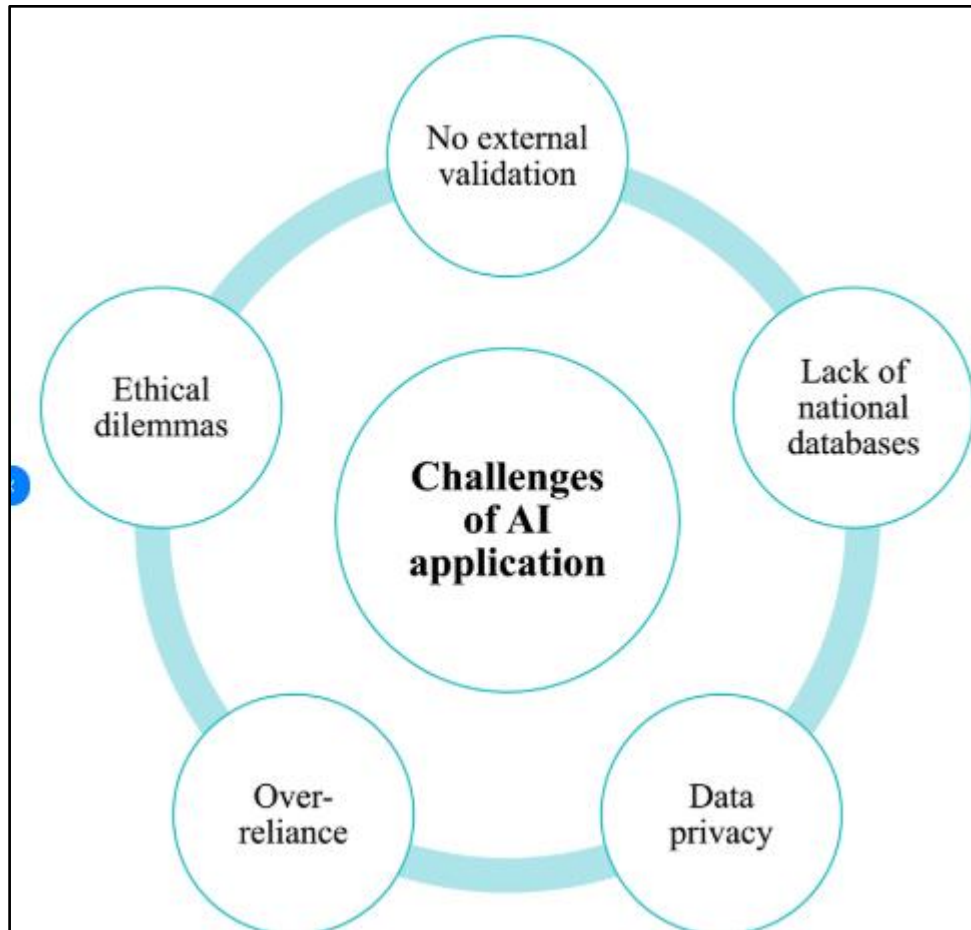
Figure 2.3: Challenges of AI-Human CRM Models

(Source: Lv, Qiu & Cho, 2024)

Framework for balancing AI automation and human integration in CRM practices

The emergence of Artificial Intelligence in CRM processes was a game changer; it really did benefit the customers by improving operational efficiency, personalization, and predictive analysis. However, excessive automation may also run the risk of alienating the customer, who craves human interaction and, therefore, is subsequently prone, especially when it comes to service-driven industries such as retail coffee. The UAE provides an interesting context where the retail coffee industry has treated customer experience as a vital differentiator, so businesses must strike a balance between automation via AI systems and human input to maintain customer

satisfaction and loyalty. In this connection, various frameworks for optimization in AI-human integration are reviewed considering an objective balance between operability and humanity-centric service delivery.

Various organisations in today's world are mainly focused on customer who are the main part of healthy organisations and AI tools will enhance it rather than displace human interaction in CRM. Such tools could automate some of the more mundane functions, such as order fulfilment or data analysis or customer segmentation, while delegating tasks of broader emotional engagement, conflict, and concerns of higher-value customers to human employees (Leung et al. 2018). This was demonstrated at Starbucks with the AI Deep Brew, streamlining operations without taking away from personal service.

 A balanced framework of AI and humans for CRM should encompass the following:

1. Using AI for predictive analytics to understand what the customer may want.

2. The ability for human input in customer interactions requiring empathy or personalization.

3. An interface where AI manages transactional tasks and humans enhance service experiences (Chen et al., 2021).

Instead of executing human judgment, AI should provide the user with relevant information to support better decision-making in executing roles. For example, AI-based CRM systems analyse consumer purchasing trends and recommend promotional offers. However, final execution of personalized marketing should involve the reliance on human intuition.

While AI-powered chatbots and virtual assistants make CRM functions easier, they lack emotional intelligence-whatever builds long-term relationships with customers. Emotional engagement is especially important to the retail coffee sector in the UAE, as it thrives on loyalty

and brand experience. An empathetic framework must first incorporate AI to support preliminary customer interactions, switching to the use of a human agent for more complex queries.

Provide a mechanism of tools built around sentiment analysis that notifies a human agent when emotional sensitivity should be provided. According to Sundar et al. (2016), the AI should present human conversational patterns of interaction so as to elevate the degree of engagement. It's critical for an AI to acquire the necessary knowledge and skills for CRM to remain effective. The AI-human integration framework should allow AI to adapt based on real-time customer feedback, thus refining automation accuracy and enhancing human involvement. Among the main aspects are

1. Continuous machine learning algorithms that further refine customer interactions over time.

2. The presence of human intervention to correct AI misinterpretations and improve learning.

3. As stated by Iyelolu et al. (2024), dynamic CRM strategies will alter the level of human engagement with the AI, depending on the customer's behaviour.
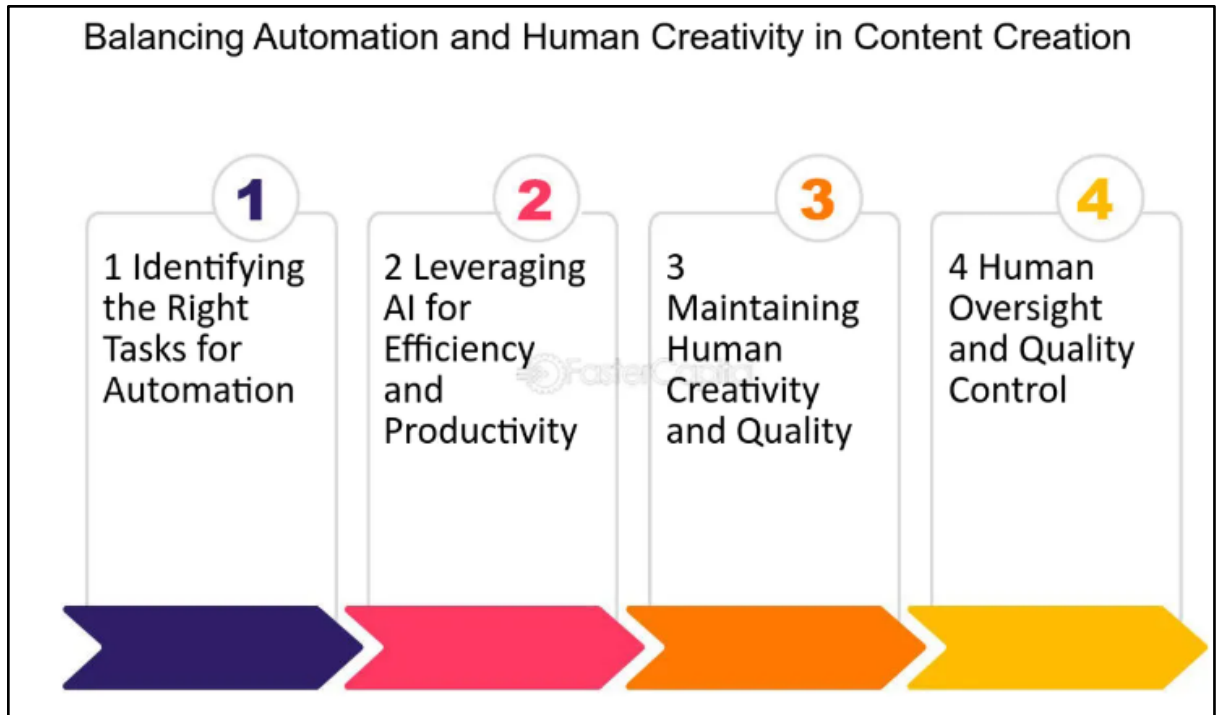
Figure 2.4: Framework for proper balancing human involvement and AI automation

(Source: Iyelolu et al. 2024)

On the other hand, uncontrolled dependence on artificial intelligence in CRM can definitely lessen the personal engagement, particularly in service-oriented businesses that value personal interaction. Studies reveal that about 60% of customers would prefer, in the case of complaint resolutions, to have human agents. Therefore, AI-human frameworks need to have contingency measures in place to transition a customer from automation to a human agent whenever required. Integrating CRM systems with AI would take a lot of resources in terms of infrastructure, training, and upgrades (Huo et al. 2024). Some small and medium enterprises in the UAE may not be able to bear costs equivalent to the price tag for implementation. Some solutions to help with the situation include:

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1. Cloud-based AI CRM systems that minimize the need for great investments in infrastructure.

2. Scale in AI adoption, starting with basic automation before moving to much more advanced AI tools.

3. Government and industry initiatives in support of AI in retail.

So, an optimal AI-human model forms a complementary CRM with a balance between automation and emotional intelligence, letting a business enjoy maximized proficiency in its operation and at the same time gaining the trustworthy engagement of customers. Although CRM is aided by AI's predictive analytics, automation, and personalization, the role of a human as a confidence and loyalty builder is still indispensable. The retail coffee business of the UAE must embrace a hybrid model of CRM, whereby AI helps rather than replaces the human expertise.

2.5 Role of cultural sensitivity in AI-powered CRM systems

Cultural sensitivity serves as an imperative in relation to customer relationship management systems with AI capabilities, especially considering the UAE, a diverse market where customers hailing from different cultural backgrounds exist. While AI increases efficiency and personalization, cultural insensitivity would lead to miscommunication, alienation of customers, and raised ethical questions. In the coffee retailing industry where customer experience is a key factor, the AI-enabled CRM must be implemented according to culture-specific considerations that comprise languages and social norms. This section will critically evaluate cultural sensitivity's role in customer relationship management systems powered by extreme learning machine algorithms, taking account of challenges and opportunities for creating an inclusive and personalized customer experience. In places like UAE, which is home to many

nationalities and cultures, cultural sensitivity is not just a nice thing to have, it's a must-have, especially in businesses like the retail coffee sector. When companies use AI-powered CRM systems, they need to make sure that the technology respect different customer backgrounds, values, and behaviours. If AI can't adapt to the cultural norms of the people its interacting with, then the whole CRM experience can feel cold, robotic or even offensive sometimes.

Cultural sensitivity means understanding and respecting how people from different cultures communicate, behave and expect services. In the context of AI in CRM, it's about making sure that AI tools, like virtual assistants or chatbots, don't just use generic templates, but adjust their language, tone, and responses based on who the customer is. For example, a chatbot speaking with an Emirati customer might need to use more formal and respectful tone, while a western expat might prefer a more casual, friendly approach. If AI doesn't adjust properly, customers might feel like the brand don't really "get" them, and that can affect loyalty.

In UAE coffee retail sector, this is super important because people come from all over the world, and each group may expect something different. For instance, in some cultures, it's respectful to use titles like "Mr." or "Madam," while in others, it might feel too distant. AI systems need to be trained to understand these nuances so they can communicate in a culturally appropriate way. Cultural understanding in marketing is critical in Arab markets. If AI doesn't respect these norms, customers might find it rude, even if it's just a small mistake. Now, AI alone can't fully understand culture because culture is complex, and not everything can be turned into data. That's where the human factor comes in. Human employees can teach or train AI systems to become more culturally aware by giving feedback and helping adjust systems when they make wrong assumptions. Also, when AI systems can't handle a sensitive situation properly, human staff should be able to step in and take over the interaction.

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Another part is language—which is also part of culture. In UAE, many people speak Arabic, but lots of others speak English, Hindi, Tagalog and more. So AI CRM systems must be multilingual and able to switch smoothly between languages depending on who it's dealing with. It's not just about translating words but also about capturing the meaning and emotion in those languages. That's what makes the difference between a good customer experience and a great one. In the end, cultural sensitivity in AI-powered CRM is about building trust and respect between brands and their customers. When people feel like a brand understands their culture, they're more likely to return. For the UAE coffee retail sector, this can mean stronger brand loyalty, better customer relationships, and more successful integration of AI into daily service. AI is powerful, but without cultural understanding, it risks becoming disconnected from the people it's meant to serve.

Language Adjustment and Personalization

AI-CRM are data-driven early insights for customer experience personalization factor. However, broad linguistic and communicational style differences exist across cultures. In the UAE, a multilingual and multicultural market, CRM systems must accommodate:

An AI chatbot and virtual assistant necessarily must process and reply in numerous languages according to Chaves et al. (2022), including Arabic, English, Hindi, and Urdu. Personalization is one of the key strengths of AI-driven CRM systems. With the use of data analytics and machine learning, AI can process vast amounts of information about a customer's past behaviors, preferences, and interactions. For example, AI can track what type of coffee a customer orders most often, at what time they usually visit, and whether they prefer hot or iced drinks. By analyzing this data, AI can make personalized recommendations, such as suggesting a new flavor based on the customer's past preferences or sending them a special offer on their

favorite drink. This can make customers feel recognized and appreciated, leading to increased loyalty and satisfaction.

Adaptation to local expressions. AI is to be trained to pick up culturally acceptable expressions, avoiding language misinterpretations that might meet with offense from the customers (Xiao, 2021). In today's retail coffee sector, especially in a diverse market like the UAE, language adjustment and personalization play a big role in making customers feel valued and understood. Language adjustment is all about how businesses use language to connect with their customers in a way that resonates with their preferences, cultural background, and emotional state. When integrated with AI and human factors in CRM systems, it can help deliver more tailored and personalized experiences for each customer. In the UAE, where there's a mix of local and international customers, this becomes even more important.

However, language adjustment is equally important, especially in a multicultural country like the UAE. AI may collect data and make recommendations, but the language used by virtual assistants or automated systems must align with cultural expectations and personal preferences. For instance, a customer might prefer an automated message in Arabic, while another customer may want it in English, and some might even prefer a more casual tone or formal one. AI can be programmed to adapt to these preferences, ensuring that the message feels more personalized and appropriate. This can improve the overall customer experience, as people are more likely to engage with brands that speak to them in a way they are comfortable with.

One of the challenges with language adjustment in AI systems is that while AI can detect patterns and preferences, it doesn't always fully understand nuances or emotional tone in communication (Li et al., 2023). This is where the human factor becomes crucial. For example, while AI might recognize that a customer prefers a certain type of drink, a human employee can

pick up on emotional cues and adjust the interaction accordingly. If a customer is in a rush or seems frustrated, an employee can adjust their tone and speed of service, which is something AI may not always handle well. Therefore, while AI plays a critical role in personalizing experiences through data analysis, the human touch ensures that the communication feels genuine and empathetic. AI also allows for real-time personalization through predictive analysis. For example, if a coffee shop knows that a particular customer usually orders a latte every morning, the system can prompt the employee to offer the same drink before the customer even asks. This kind of real-time adjustment not only speeds up service but also creates a sense of familiarity and connection, which is highly valued in the UAE's coffee culture. However, AI needs to be programmed to handle more than just routine patterns. It must also accommodate for unexpected changes, like if a customer's preferences suddenly change or if they are in a different mood.

In conclusion, language adjustment and personalization are key elements in enhancing customer experiences in the UAE's coffee sector. AI helps businesses understand and predict customer behavior, while human staff can adjust the language and interactions to ensure the service feels personal and emotionally resonant. By combining AI's data-driven capabilities with human emotional intelligence, businesses can create a more personalized and culturally sensitive CRM strategy, which is crucial for success in a diverse and competitive market like the UAE.

Alteration of AI-Driven Consumer attachment

The cultural context demands that the AI in CRM reflects the client's expectation that is shaped culturally. For instance:

According to Swanagon & Simpson (2023), it's different across cultures with respect to service expectations: In high-context cultures like UAE, Japan, personalized interaction is expected, while efficiency takes the front row in low-context cultures such as US, Germany.

The AI-generated recommendations should conform to cultural predispositions: For instance, the retail coffee businesses in the UAE would like AI to adjust product suggestions in line with religious dietary guidelines- such as promoting non-alcoholic and halal-compliant beverages.

Ignoring of Cultural Bias and Ethical AI

AI systems are predicated upon historical data that may comprise biases that favour certain cultural groups. For cultural fairness, there is the need for regular audits of AI models by firms to identify and well-communicate the biases that need correction. The leverage of cultural diversity datasets at the core is intended to contribute to a more inclusive AI-driven CRM environment. As opined by Challoumis (2024), businesses are bound to adopt ethical AI structures for fairness and inclusion, so AI-powered CRM does enhance cultural sensitivity, not undermine it.
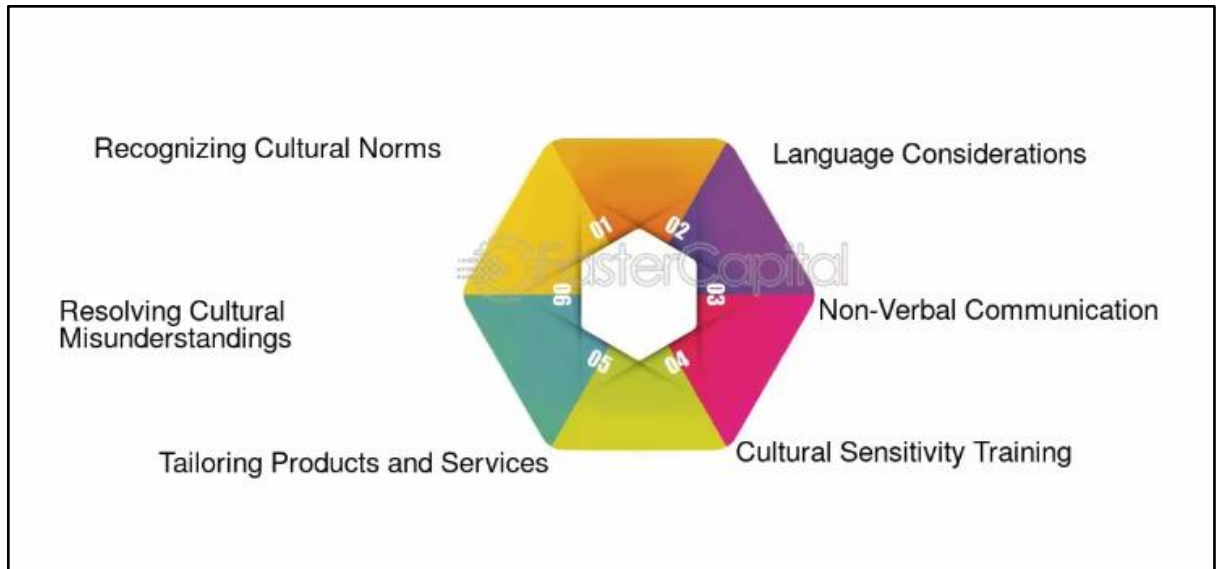
Figure 2.5: Role of cultural sensitivity in AI-powered CRM systems

(Source: Challoumis, 2024)

Overall to increase cultural sensitivity in an AI-powered CRM, it would help if businesses cultivated the ethical and bias-mitigating role of AI through guided cultural audit appraisals. The essence of this would be regular checks that identify any forms of cultural bias and eliminate them, which would enhance inclusivity. According to AlAfnan (2025), this entails developing multilingual and contextually aware systems, allowing CRM to operate in multiple languages and within culturally acceptable standards for certain communication styles. Also, the human oversight function of the decisions made by the AI is of utmost importance because the engagement of human agents provides supervision over AI-generated recommendations so as to align with cultural sensitivities. Cultural-aware AI-driven personalization implies that recommendations and engagement strategies would be crafted within the socio-cultural context of customers. Finally, transparent functioning of AI system needs prioritizing firms should expose the reasoning that establishes how their artificial intelligence reached its decision to build customer confidence and address the prospect of cultural insensitivity (Seizov & Wulf, 2020).

Culturally sensitive AI becomes an enabler for effective CRM performance across a wide and diverse market like that of the UAE. The surprises, chatter, and recommendations by AI need to take into consideration cultural norms to improve customer engagement and satisfaction even further. However, many challenges like cultural biases, moral quandaries, and AI being short on contextual sympathies need constant refinement in certainly any and all CRM strategies (Dwivedi et al. 2021). Businesses can ensure that AI-powered CRM is culturally adaptive and customer-centric through the employment of ethical AI techniques, multilingual support, and human oversight.

2.3 Theoretical Underpinning

The convergence of AI and human factors in CRM within the retail coffee sector can be evaluated through several theoretical lenses. The Technology Acceptance Model offers insights into how the use of AI in CRM systems is perceived and accepted by both employees and customers. As stated by Granić & Marangunić (2019), the acceptance of this model refines the dimensions of perceived ease of use and perceived usefulness that affect both customer engagement and operational efficiency.

Further, the social presence theory expresses that in an AI-enabled CRM, human-like interactions must be present (Bakker, 2022). AI may make the procedure faster, but rather like automation, AI lacks empathy, and without it, customer satisfaction reduces. The businesses need to exercise a congenial balance: proper human contact blended with AI automation. The service-dominant logic concept underlines customer relationships with AI as an aid, not as a replacement for human engagement. Values of according to trust vary towards AI-powered systems because of their social presence by means of personalized communication. In addition, as opined by Khan &Mishra (2024), equity Theory suggests an evaluation of AI-driven

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interactions by customers depending on how much they feel the interaction is fair. Cultural bias in AI may lead to customer dissatisfaction. Businesses can build a CRM framework that optimally aligns AI with human-centric service through the help of these theories.

Theory of Reasoned Action

The Theory of Reasoned Action recommended by Pryor (2022), is an insightful framework for the understanding of consumer decision-making in CRM systems integrating both AI and human. TRA suggests that behavioural intentions of an individual are a product of their attitudes and subjective norms and, thus, it would be especially relevant in understanding customer acceptance of AI-driven CRM). The consumer trust in the sector of retail coffee is influenced by social approval and personal attitudes of the consumers towards the technology with respect to the AI-enabled services.

The intended AI-powered CRM system will have to align with customer attitudes by earning their trust through transparency, personalization, and culturally sensitive dealings. TRA states that some subjective norms-chosen from the considerable amount of peer influence and societal expectations affect the inclination of consumers to adopt AI-driven CRM solutions. According to Zuhroh & Rini (2024), if perceived as intrusive to users and culturally insensitive, the acceptance by customers in a collaborative engagement setting may inadvertently fail, notwithstanding the service efficiency gain promised. Through Applying TRA businesses will understand how properly to design AI-human CRM interactions for better trust and satisfaction among customers. Addressing consumer issues before they arise, alongside ethical use of AI, can boost AI adoption and good behavioural intentions.

2.4 Literature Gap

While literature on the adoption of AI in customer relationship management continues to burgeon, there remain lacunae, particularly in the balancing act between AI-led automation while facilitating human engagement in the retail coffee sector of the UAE. Most of the existing studies focus on the technological advancements in CRM enabled by AI yet quite few studies explore how AI-human collaboration enhances the long-term relationships with customers and brand loyalty. While plenty of literature exists on AI ethics and strategies for bias mitigation the training of AI models to enable them to respect regional and cultural nuances in customer interactions is scarcely studied. It is noted that, as a nation with a multicultural customer base, it would be helpful to more deeply investigate the ways AI-driven CRM systems interact with expectations derived from the various cultures.

Additionally, customer trust and acceptance in CRM applications of AI are still scarce. The premise of TRA suggests that certain predispositions and social norms influence the implementation of AI systems. Lack of empirical studies has been observed in analysing how the consumer market accepts AI driven engagement within the retail coffee sector in UAE. There are gaps where the research has yet to be done in determining how transparency, personalization, and a fair practice in artificial intelligent systems affect consumer behaviours. While some studies investigate the productivity benefits expected from AI in CRM, fewer target these operational inflexibilities and the costs involved with the human-AI integration. Future studies should analyse the financial and logistical usefulness of these hybrid AI human CRM systems for the small and medium sectors, notably in competitive retail spaces. Closing these gaps will serve to improve the strategic implementation of AI-human CRM models, thus guaranteeing their efficiency in establishing sustainable customer relationships.

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2.5 Summary

From the above chapter, it can be concluded that the complementary functions of AI and human considerations are stated to provide a plethora of benefits and opportunities, while their incorporation into CRM in the UAE's retail coffee sector is the subject of several challenges. While AI may be useful in enhancing engagement, efficiency, and personalization, its implementation is dependent on the elimination of cultural biases while maintaining transparency and human intervention. The available literature shows that much potential exists in collaboration between AI and humans, however, there is a dearth of literature pinpointing cultural consciousness, customer trust-related challenges, and operational challenges surrounding them. The remediation of these gaps would provide a better path for AI-centric CRM strategies designed for better customer sustainability. Future work needs to be done on AI human co-auctioning at the workplace, the ethical way of using AI, and the cost-effectiveness of adopting AI in SMEs.

Chapter 3: Methodology

3.1 Introduction

Research methodology is a step-by-step procedure that is undertaken by the researcher to create a method for research (Snyder, 2019). Every research project requires the development of an adequate methodology that can assist in meeting the research aims and objectives. In this research, the research onion framework has been utilised for following a step-by-step development of a research methodology. In this section of the research, the selection and justification of the selected research philosophy will be presented. Besides, the section will briefly present the research philosophies used in research and the characteristics of these philosophies. The chapter will also present the approach that has been used in this research. The section will discuss the various research approaches and then elaborate on the characteristics of these approaches and justify the selection of a research approach in consideration of the research topic as well as research objectives. The data collection process will also be depicted in this section in detail along with the process of interpretation in the sub-section of data analysis. Besides the academic guidelines and the considerations that have been undertaken to maintain high ethical standards of the research will also be presented.

3.2 Research Philosophy

Research philosophy is a vital component of the research that guides the overall process of the research (Tamminen, & Poucher 2020). It considers the fundamentals of the research such as the nature of the subject area and topic, The selection of an appropriate research philosophy is important as it forms the basis for further progression of the development of research methodology for addressing the research problem. It has a huge impact on the tools and techniques that have been used in the data collection method and data analysis method. The selection of an appropriate

research method ensures that the research findings are valid reliable and transparent which can overall enhance the academic integrity of the research. There are three major research philosophies which include, pragmatism, interpretivism and positivism.

Pragmatism research philosophy considers practicality and effectiveness overestimations and assumptions (Kaushik &Walsh, 2019). The philosophy considers exploring real-life problems rather than exploring complex realities. The pragmatism research philosophy ensures that reality can be complex and is constantly changing. The research as a result needs to be flexible. For this particular research, pragmatism has been related to the use of a mixed method. This allows the research to explore considering various options. However, in mixed methods, different types of data can provide contradictory insights which can make the research unreliable. From this, it is seen that the use of pragmatism has been related to compromising the credibility of the research in some cases and hence this philosophy has not been used in this research.

Positivism research philosophy utilises science-backed methods for exploring a social phenomenon (Park et al. 2020). The idea of positivist research philosophy is that reality can be easily measured and expressed in the form of numerical. According to this philosophy, knowledge and insights can be acquired through the use of observation and experimentation. The research philosophy prioritises objectivity and ensures that personal biases related to interpretation can be avoided. The other nature of positivism is to explore the cause-and-effect relations between variables of the study. However, it is important to note that the nature of objectivity does not suit exploring areas or subjects where knowledge and facts can be influenced by the experience of the people. Besides, since the knowledge and insights are expressed in numbers it may fail to capture and present the complexities of ideas. Considering the nature of the topic which seeks to explore

human-AI integration for customer relationship management, the philosophy has been deemed unsuitable.

Interpretivism research philosophy is concerned with the subjective interpretation of phenomena in the social landscape (Nickerson, 2022). The idea of interpretivism is that reality is created by considering experiences and interpretation. This perspective shows that reality can be different for different people and hence subjective aspects are important to be considered. Interaction with the environment is vital in creating knowledge and experiences. For this research, the use of interpretivism research philosophy allows the researcher to consider various perspectives which can help in developing a holistic knowledge about the research. Furthermore, the philosophy allows the researcher to develop complete knowledge by considering all subjective variables of the research. In this case, human-AI integration in the retail coffee sector of the UAE for customer relationship management can be subjective considering the diverse industry. For this reason, it is important that experience and perspective are considered in order to develop accurate knowledge. Hence for this research, an interpretivism research philosophy has been used due to its suitability with the nature of the research topic.

Besides it is also important to note that realism research philosophy also exists which is rarely used in the current research. The realism research philosophy is concerned with the fact that reality exists independently of the perception of human being. The use of realism as a research philosophy has been noted to be in health fields and social sciences. However, if the topic of this current research is effectively investigated it can be understood that it business research. Hence it does not align with the nature of realism research philosophy and hence has been avoided. The particular research intends to explore multiple subject areas that include human factor integration with AI, and customer relationship management, which are subjective topic areas. It is understood

that these areas can be dependent on a range of contexts, and hence the philosophy of interpretivism can be suited to the exploration of this topic. The selection of interpretivism research philosophy has been driven by the subjective nature of this study, where contexts are important to be considered in developing relevant insights. From the provided perspective, the selection of interpretivism philosophy in this research that seeks to explore the integration of human factors and Artificial intelligence in customer relationship management practices can be justified.

3.3 Research Approach

The research approach is the strategy opted by the researcher for conducting the research (Opie, 2019). The approach primarily dictates the design, methods and the procedures to be used in the research for analyses and collecting the data. The selection of an appropriate research approach is important considering the fact that is influenced by research objectives. There are three research approaches which include, deductive, abductive and inductive. The deductive research approach is used to understand the research topic in consideration of an already verified research topic (Pearse, 2019). In the initial stages of the deductive research approach, the theory is utilised to develop precise knowledge or assumptions which can be verified. The use of the deductive research approach in this case has allowed the researcher to develop knowledge for the research topic by considering the perspective of the theory of reasoned action. Furthermore, during the data interpretation section of the research, the theory can be used to discuss the insights of the research findings. Hence this allows the research to be more credible and acceptable in the research community. For this reason, a deductive research approach has been selected for this study.

The abductive research approach is concerned with the development of a new theory of explanation (Janiszewski, C., & Van Osselaer, 2022). The approach is primarily based on making assumptions or guesses to explain the research objectives. This type of reaches challenges existing

theories and tries to explore insights that has not been explored before. The findings generated from the abductive research approach cannot be backed by any existing studies. As a result, the insights generated from this study can also be circumspect and questionable. However, this study is concerned with understanding the impact of AI-human integration for customer relationship management. The subject area can be easily explored by considering existing topics and studies since AI and customer relationship management have been an area of interest for a number of years. This shows that the nature of the study does not align with the characteristics of the abductive research approach. Hence, the use of an abductive research approach has been avoided in this research.

On the other hand, the inductive research approach is like the abductive research approach (Ryder Jacob & Hendricks, 2019). However, in the inductive research approach, specific instances are utilised to make more general inferences. Inductive research is highly data driven and the researcher collects data without any predetermined notions. In this research, the design and the data collection processes evolve with the research. This means high flexibility in the design of the research is gained although, the research in this case may lack definite structure which makes the findings of the research very out of context when anticipated findings of the research are considered. In this research, the findings are definite with a clear aim and hence inductive research may not be suitable for which the researcher has avoided the approach.

3.4 Research Strategy

Research strategy is the plan of the researcher to conduct a study (Johannesson et al. 2021). The path of the research to achieve the research objectives through methods and the process of data collection is assisted and designed by the selection of research strategy. The selection of research strategy is highly dependent on the choices of objectives and the philosophy

of the research. It ensures that there is a connection between the objective of the research and the selected data collection method. There are many research strategies that are used for research purpose some of which are as follows:

Case study

A case study research strategy is used when the research is focussed on the exploration of a small group of people. The selection of case study as research strategy is highly common in subject areas of business law and social sciences. The strategy also allows the incorporation of both qualitative and quantitative data collection methods.

Survey

A larger group of people are selected for collecting data that can form the appropriate representation of study. Data is collected using structured interview questions or questionnaires. This strategy is adapted for descriptive of exploratory research allowing the generation of insights that can be used address the research questions. In this research, a semi-structured interview research strategy has been applied

Action Research

This research strategy is concerned with the involvement of the participants in the research by conducting actions or practical problems. The actions are then observed by the researcher and then the change and effects are studied over the period to identify notable changes that forms the findings of the research.

Ethnography

In this strategy, the researcher conducts a deep observation within culture or a social group. The behaviour and the beliefs of the participants are monitored making it more suitable for researcher in the social fields.

3.5 Research Choice

The approach to data collection and data analysis in understood as the choice of the research. The different types of the data that can be collected and the methods that can be used in the research in influenced by the decision-made in this study by the research. There three major research choices, mono method, mixed method and multi method. In mono method choice, there is only one type of data is selected either qualitative or quantitative. The method of data analysis is also selected accordingly. On the other hand, A mixed method choice is related to the use of both qualitative and quantitative data. The incorporation of both the type of data in the research enhances the capacity of the research to explore the topic of the research in depth. The multi method research choice is when two methods are used to collect similar type of data. Such as application of focus group and interview for the collection of multi method or the use of experiments or semi-structured interview for the purpose of collecting quantitative data. In this research a mono method has been selected to ensure that consistency in the collection of the data has been selected.

3.6 Research Design

Research design is the blueprint of the study (Sileyew, 2019). It assists the researcher in outlining the ways to collect and interpret the data which can be used to answer the research question. It ensures that the research is conducted in a systematic manner and ensures that the research does not sway outside its scope. There are three major research designs which include, descriptive, exploratory and explanatory. The descriptive research design is directed towards understanding the characteristics of phenomena (Siedlecki, 2020). In this research, it has allowed the researcher to understand the characteristics of AI-human integration. A descriptive study is more directed towards describing the considered context and explaining the causes or effects. The

existing conditions are thoroughly observed and understood which is then referred back to the objectives. It allows for the identification of patterns and trends which can be used to develop more substantial evidence and inferences for answering the research question. Hence, considering the facets present above which align with the type of study, this study has opted for the use of a descriptive research design.

On the other hand, exploratory research design is concerned with the conducting of research where there is a huge gap in the existing knowledge and understanding (Olawale et al. 2023). The exploratory research aim to assist in developing a hypothesis which can form the basis for future research. It is seen that the nature of this topic is related to AI and Human Integration which has been a popular area of study in the past few years. There is enough research available which can be used to develop knowledge about the research and further compare it with the current findings. As a result, this particular study may not benefit by the application of an exploratory research design and for this reason, the design has not been selected. Explanatory research design is concerned with understanding the variables of the study which can be used to explore the underlying causes of a particular phenomenon. It aims to understand the cause relationship between variables. Further, the nature of the explanatory research design makes it suitable for quantitative studies. However, the nature of the study requires in-depth exploration which can be done by using qualitative data. This shows that explanatory research design can create a conflict in effectively addressing the research objectives. For this reason, the researcher has not applied explanatory research design during this study.

3.7 Sampling and Participants

Sampling is the process of selecting a population that can act as a representative of a large population in the research. There are many sampling processes such as purposive and random.

Random sampling allows the researcher to induct participants without any control reducing the bias of the researcher. However, the selected participants may not be appropriate in the context of the research and hence the reliability of the findings can be compromised. For this reason, a random sampling method has not been chosen in this research. In contrast, the research has opted for the use of purposive sampling. In this sampling method, the researcher can examine the characteristics of the participants and then induct them after their consent to the research. During this research, participants were screened on the LinkedIn platform by considering their characteristics in accordance with the research context. By following this process, 50 participants were selected to be a part of this research whose responses have been used to address the research problem and answer the research questions.

3.8 Data Collection

Data collection is the process through which insights and information from sources are synthesized for research purposes. Data collection is the main part of the research methodology which allows the research to take an integral step in meeting the aim of the research. The information collected during the data collection phase ensures the progression of the research and hence it is important that an appropriate data collection method has been selected for the research which compliments the nature of the study. It is understood that there are two types of data that are collected during this process, qualitative data and quantitative data. Qualitative data are helpful in conducting in-depth exploration while quantitative data allow determining the relationship between variables. Considering the nature of the study, qualitative data will be collected in this research. The use of qualitative data has been found to be effective in considering the experiences of the people and allows accurate exploration of a social phenomenon. It will help the research in exploring ways in which Human-AI integration can assist the customer relationship management

process within the UAE coffee retail sector by integrating the real-life experiences of people involved in the process. The use of quantitative data in research is implemented in a structured methodology through structured questions and answers. When quantitative data is used, researchers generally develop hypotheses which are introduced in the early sections of the research. The questions developed are intended to address the hypothesis developed. Since these data and insights are presented in the form of numbers, they allow the advantage of conducting a comparison and then making and calculated inference accordingly. Also, the insights generated from the quantitative data are quicker and straightforward, that makes sure that precise observations and conclusions can be made. However, there are certain disadvantages related to the use of quantitative data in research. These data do not consider contexts or other subjectivities behind the phenomena. As a result, it can have a significant impact on the efficiency of the research in the identification of the whys and other causes of the phenomena. As stated earlier, the use of quantitative data is related to a structured design, which means that the research has limited flexibility. This can act as a barrier in terms of exploring newer findings of the subject area, even if new themes or findings have emerged, there can be limited understanding of the exploration related to it. In terms of limitations, it is a common understanding that numerical data cannot be used to explore subjective aspects such as the experience of the customers. In the context of the study that seeks to explore the experience of the customers and Human AI integration, the use of qualitative data can be deemed to be limiting, affecting the intended richness of the study. It is also important to note that the interpretation of the numerical data is highly reliant on the calculation in which values such as average and standard deviations are considered. However, when the interpretation is highly reliant on mean and average value, it can deter important outcomes that can have an influence on the insights developed during the study.

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Another drawback of quantitative data is limiting the involvement of the participants. The collection of quantitative data is done by considering instruments that use specific questions where the options for responses are in numbers. As a result, participants are not provided much scope to express themselves fully, which can lead to a misinformed understanding of the phenomenon. The questionnaire used in the collection of quantitative data is also not very considerate of the change in culture, and hence, the collected data is affected in terms of bias and accuracy. Considering these advantages of the quantitative data, in this research, the collection of quantitative data has been avoided.

On the other hand, qualitative data is descriptive that which generally can contain numbers but which descriptions. In this research, the use of qualitative data has been appropriate in capturing the feelings of the participants that can be utilised for a deeper exploration. Furthermore, in this study, the demand is to understand the integration of AI with humans in the coffee retail sector that complies with the nature of the qualitative study. The use of qualitative data is apt for exploring the how's and whys of the phenomena. The type of data is subjective and interpretive. This can be beneficial in understanding complex phenomena due to a high level of flexibility. The descriptive data and information collected from this type of information help in considering motivations and feelings, allowing the researcher to explore customer experience and expectations, which is the subject area of this research. Qualitative data allows the researcher to conduct a contextual awareness that enriches the research and addresses areas that have not been explored before. In the same regard, it is important to note that the most important part of qualitative data is its flexibility.

It is also important to note that there are two sources of data which are explored when selecting sources for collecting data, these sources are primary and secondary. The secondary

sources of data provide the researcher with already collected data which are used for the current research. However, secondary data provides no control over the quality of data besides, the context of the collected data may also be different which reduces the significance of the research. Furthermore, secondary data do not allow the researcher to find any significant inferences which can enhance the contribution of the research. For this reason, secondary sources have noted been used in this research for collecting data.

In contrast, primary sources of data allow the researcher to acquire data in accordance with convenience. It is seen that the researcher can dictate the source of data which is used for collecting information which further ensures that quality data has been collected. Primary sources ensure that the collected data suits the context of the research which enhances the validity and reliability of the research. In this research, primary sources signify participants in which personnel related to the customer relationship management process of the UAE coffee retailing sector will be selected. 50 participants have been selected to collect qualitative data from the primary sources. Hence, considering the above discussion it can be said that this research has followed a primary qualitative data collection method. The research has adhered to the use of interviews as an instrument for collecting primary qualitative data. The interview was conducted in the semi-structured way in which qualitative response was provided to the respondents. Google form was used to design the interview and then sent to the selected participants after they had consented to their participation in the research. The provided responses were recorded in the Google form which was further utilised in the research to address the research question and the aim.

3.9 Data Analysis

Data analysis is the step that is taken after the data collection is completed by the researcher. In this stage of the research, the data, which is meaningless at this point in time, is

transformed into meaningful insights that can be used in accordance with the research to address the research problem. The analysis technique adapted by the research depends on the type of data collected. Quantitative data methods, such as inferential statistics and descriptive statistics, are used, allowing identification of the relationship between different variables. On the other hand, for qualitative data, the processes that are generally used are thematic analysis, axial coding, narrative analysis or grounded theory. The application of these methods allows for the identification of patterns and themes that can be effectively used to answer the research questions.

Data analysis is the process used by the research for the interpretation of the collected data during the data collection process. In this research, the researcher was required to interpret qualitative data that was collected from the interview conducted using Google Forms. It is seen that Google Forms auto-generate graphs based on the responses of the participants. In this regard, the research has adhered to the graphical analysis of the responses that have been collected from the participants. In this research, the graphs collected from the responses will be presented and then interpreted. The use of visuals has been related to enhanced understanding which further assists the readers. Hence, the research has opted for the use of graphical analysis as the data interpretation technique.

3.10 Research Limitations

The identification of research limitations by the researcher is important in ensuring that the research is transparent and honest. When the researcher acknowledges that there were some shortcomings of this research, it ensured that the readers are not misled while ensuring that the critical thinking process can be applied. The research limitations identified in this research also act as grounds for conducting future research which can contribute to more deeper understanding of the subject area. The identification of the research limitations is also important for the

credibility of the research and make sure that the research meets the academic standards allowing high level of acceptance among the academics.

Research limitations are understood as the shortcomings in the selected methodology for the research. In this research, a qualitative research method has been selected which encompasses a wide range of disintegrated aspects. The use of the qualitative research method means that there is a lack of measurable insights. The research has not adhered to secondary sources which means that the case study has not been included which may limit the understanding in the practical business world. The research also only focuses on the retail coffee sector and hence the findings may be specific to this industry. The research has also taken insights from professionals who have worked in the UAE coffee retail sector. This means the findings are not relatable to the region of UAE. Other regions of the world may not relate to the insights developed during this particular study. It is also important to note that the time limit has further developed constraints in inducting more diverse participants in the study which could have yielded more diverse results. As a result, the findings of the study could have been more enriched making the study more credible and accurate. Further, the study also has limitations in regard to descriptive analysis which would have helped in determining a direct relationship between the Integration of human factors and artificial intelligence with customer relationship management practices.

3.11 Reliability and Validity

The two fundamental concepts in the research methodology are reliability and validity. These concepts are concerned with the measurement of the accuracy and the validity of the research that can make it more acceptable among the academic community.

Reliability in research is the consistency level of the research results that has been derived by the application of the data collection method that has been discussed with the methodology section (Ahmed & Ishtiaq, 2021). When the method is applied in the same research context and similar. The aspect of the research can be crucial in ensuring that the research findings are free from any errors. On the other hand, validity of the research is truthfulness of the collected data in the given context (Ahmed & Ishtiaq, 2021). In this research it has been ensured that the collected data and information are relevant to the set context of the study. In this research, the reliability has been ensured that depicted by comparing the findings of this research with the existing research that has been presented in the literature review section. This comparison can be used to explore the consistency of the findings. Similarly, the findings that has been derived in this research has been interpreted regarding theories. On the other hand, the selection of participants in this research has been done by considering the contest of the research. The participants are part of the coffee retail sector, and their insights have been inducted in the study that ensures that the responses have been used to generate insights that are very relevant to the context of the study. Considering the arguments presented it can be said that this particular study has taken steps and procedures to maintain the reliability and the validity principles of research.

3.12 Ethical Consideration

Ethical considerations are a set of guidelines which are required to be followed by the researcher to ensure that the research has adhered to the academic standards. In this particular research, participants were inducted which makes the research vulnerable to a wide range of ethical issues. The researcher in this case, has adhered to certain steps in order to address such issues and ensure that the research can be accepted by the wider academic community.

Privacy and confidentiality issues

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The personal details of the participants have been securely stored in an encrypted device. When the data is presented in the research, no participant details were exposed which could have resulted in privacy issues. Furthermore, Data protection law was used as a guideline to handle the personal details of the participants. During the research, it was also ensured that limited personal information was asked which could further limit the extent of privacy issues.

Informed consent and deception

Before the participants were included in the research, they were informed about the background of the research and the importance of their truthful responses. This ensured that the participants had not been misled into taking part in the research. While consent form was to take consent from the participants are evidence of their wilful participation in the research.

Right to withdraw

Before the participants were inducted in the research it was ensured that the researcher had informed them about their right to withdraw. This ensures that the participants can withdraw from the research at any point in time without having to provide any justification for their withdrawal. As a result, this ensures that the participants can exit the research if they face any kind of discomfort.

Besides, the researcher has also opted for the use of proper referencing and in-text citations to give credit to the ideas that have been utilised for developing the research. The use of references allows providing credit which ensures that no ideas have been stolen without giving proper which is academic misconduct. Furthermore, the application of referencing has also ensured that the study is free from the issues of plagiarism. The research has also opted for sources that are authentic which increased the authenticity and the validity of the research. Hence it is seen that strict adherence to ethical guidelines has been followed by the researcher during

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this research which aims to understand the impact of Human-AI integration on the customer relationship management in the coffee retail sector of UAE.

3.13 Summary

The chapter has discussed the process that has been underwent in order to develop a systematic methodology for this research. It has been depicted that an interpretivism research philosophy along with a deductive research approach has been selected. The research has also opted for the use of descriptive research design. The selection of these aspects in the research has been driven by its suitability within the context of the research. Furthermore, a qualitative data collection method has been selected in which a primary source was used. The interview method was used to collect qualitative data in which questionaries were developed in Google Forms. This has a semi-structured interview which has been interpreted using a graphical analysis technique in order to ensure that the research objective can be addressed. Furthermore, during the research, it has ethical considerations has been made to ensure that academic integrity during conducting research has been maintained. The researcher has adhered to the use of the principle of anonymity and confidentiality to protect the privacy of the participants of the research. Besides, it is also seen that the researcher has considered the guidelines of the data protection laws while handling the personal details of the participants.

Chapter 4: Results

4.1 Introduction

The chapter of the study can be considered as the among the most important as it presents the raw information collected. The collected information is utilised and interpreted in accordance with the need of the research that allows addressing the research questions. In this section, the data has been collected from 50 participants of the coffee retail sector in the UAE making their responses very relevant and vital in context of the study. The data has been collected in qualitative forms in which google forms were used and then qualitative responses were provided to the customers. The generated graphs have been used in this section for visual representation of the responses that can contributed to enhanced understanding.
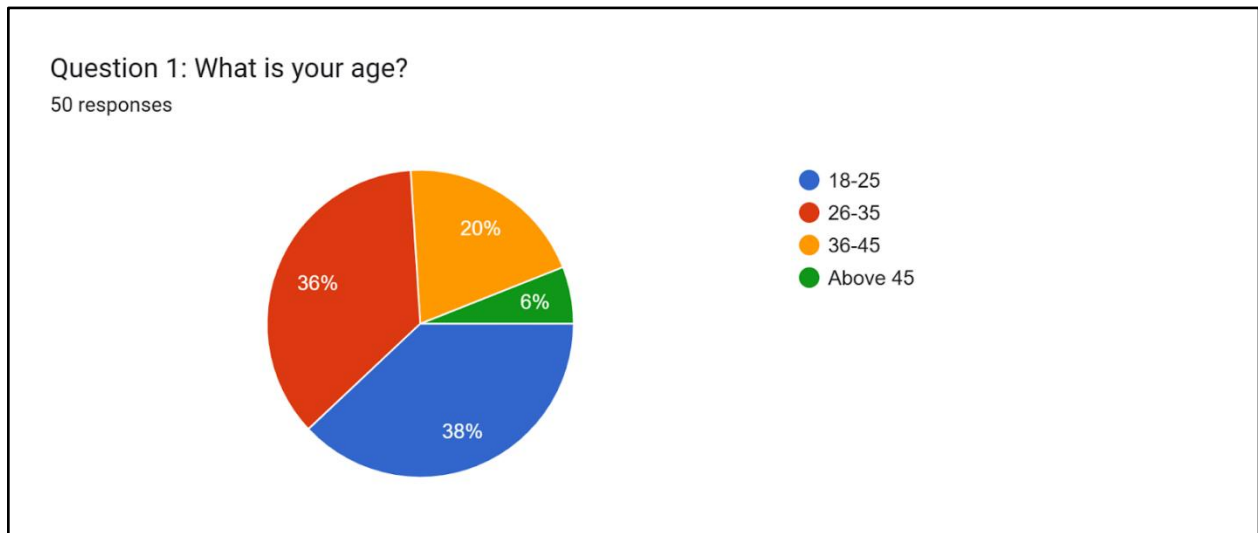
4.2 Findings

Figure 4.1: Response to Question 1

(Source: Self-Developed)

Demographics of the participants are an important factor in the responses. Different demographics can have different perceptions about a single topic that is important to be considered in order to develop a holistic perspective. The first question of the semi-structured

interview inquired about the age of the participants. A diverse age range means all perspectives have been presented in the semi-structured interview results, which can make the results more acceptable and valid. In this research, 38 per cent of the respondents were aged between 18 and 25. 36 per cent of the responses attested that they belonged to the age group of 26-35. 20 per cent of the participants were between 36 and 45. Only 6 per cent of the participants were aged above 45. From the responses gathered from the semi-structured interview, the largest group of participants were aged between 18-25. These groups generally are students or young professionals who are deemed to be very active in visiting coffee shops in their daily lives. They will also have greater experience than the other group of people about the new technologies that are being implemented in the retail coffee shops in the UAE for customer relationship management. This will enrich the results of the study as relevant insights regarding the integration of human and AI can be presented through the responses. On the other hand, the second largest age group is between 26-35. The group of people has experience with both the coffee retail services that were purely based on human factors and the current coffee shop facilities that are based on AI. Their responses as a result can be crucial in understanding the difference between human-based customer relationship management practices as well as AI-based customer relationship management practices.

20 per cent of the respondents who were aged between 36-45 are more accustomed to old traditional ways of customer relationship management. As a result, their views can be vital in exploring the contrasting perspective from the other two dominant participant groups in the study. While the smallest participants were aged above 45. This group of people are old and is less on social media or other digital platforms that can make them access the online semi-structured interview. Consequently, their responses can present the extreme of the old traditional

practices of the coffee retail shop. The interpretation of the responses of the first semi-structured interview question shows that the participants are diverse in demographics and characteristics. These responses can also represent different experiences and lifestyles that can benefit the research as they add to the richness of the results derived. Hence, when all the dynamics of the responses are considered, it can be said that the responses are significant to the study and can be helpful in meeting the aim, objectives and addressing the research questions presented in the initial stages of the research. From the inferences presented, it can be said that the responses of this question in the semi-structured interview is significant to the research.
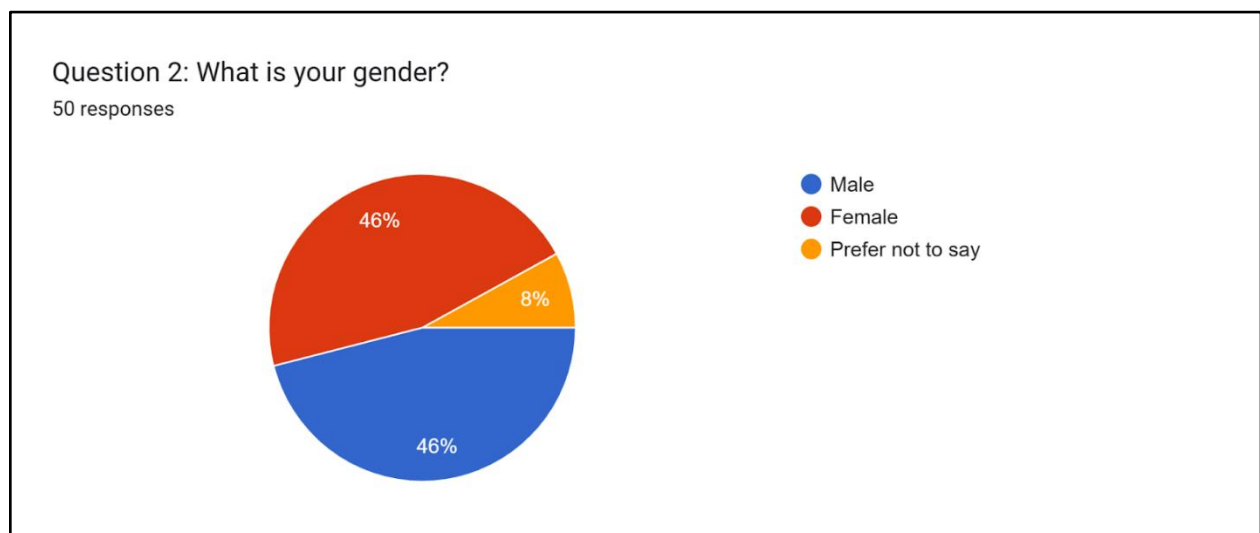
Question 2: What is your gender?
50 responses

- Male
- Female
- Prefer not to say

46%
8%
46%

Figure 4.2: Response to Question 2

(Source: Self-Developed)

The second question of the semi-structured interview was another demographic exploration that enquired the gender of the respondents. It is important that the research consists of a balanced perspective from all the gender that can ensure that the insights generated are no one-dimensional and its generalisability is reduced, Furthermore, when there is one gender too much dominant in terms of participation the insights generated can be vulnerable to bias. Hence considering this it can be said that the question asking about the gender of the participants was

significant in terms of relevance to the study context. From the semi-structured interview results it is seen that 48 per cent of the respondents are male while 46 per cent of the respondents are female. There is a very marginal difference of 2 per cent between the male and female participants in the study indicating an equal representation of both the gender that reduce bias and enhances the acceptability of the research findings. Similarly, 8 per cent of the respondents have preferred not to reveal their gender. This can be due to reasons such as privacy concerns, personal beliefs or gender identifications, showcasing that the researcher have respected the rights of the participants to be anonymous and has ensured that their identity is protected. When the research integrity is followed the findings derived are more credible and accepted by the academic community. The responses also play a vital role in making sure that different gender norms are taken into consideration allowing the research to include different gender perspective. It is a common knowledge that in the UAE the lives of women can be different from those of men. The perception towards human integration and AI for relationship management can be complex. However, the research has almost equal male and female participant, that makes sure that all variances of the subject area and the phenomena is taken into account when developing a conclusion for this research.
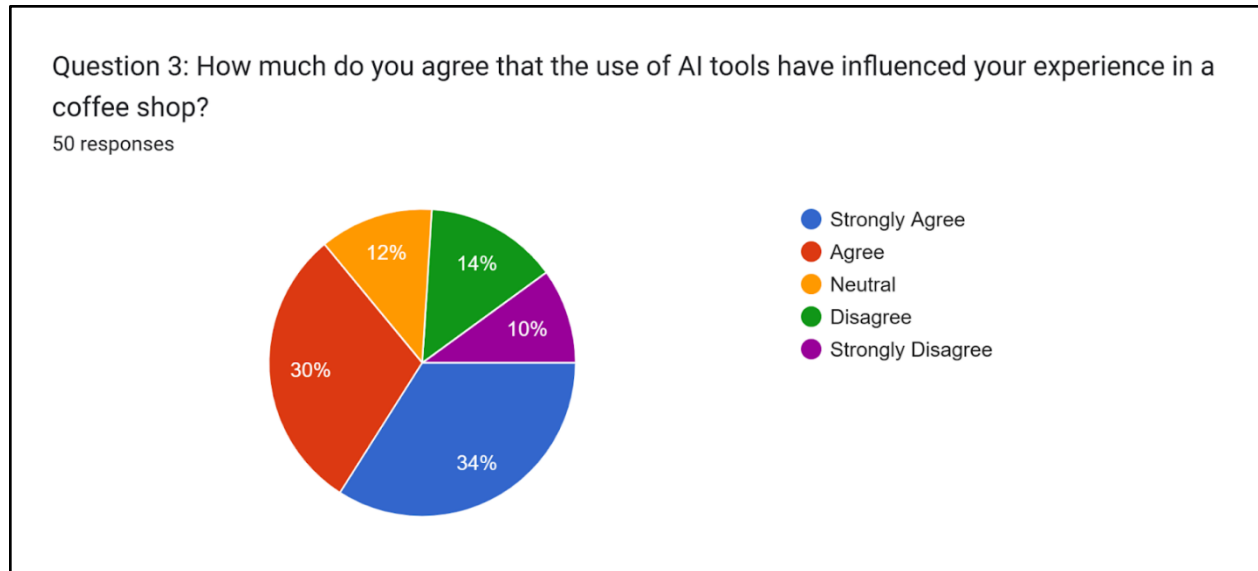
Question 3: How much do you agree that the use of AI tools have influenced your experience in a coffee shop?

50 responses

Legend:
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Pie chart values: 12%, 14%, 30%, 10%, 34%

Figure 4.3: Response to Question 3

(Source: Self-Developed)

Businesses have widely adopted the use of Artificial tools in different areas of their operation. It is noted that when AI is used by businesses such as coffee retail shops, it can provide a seamless interaction to the customers, which can be a positive factor for their experience. The question of the semi-structured interview explored the influence on the experience of the customers when AI tools are implemented. 34 per cent of the participants strongly agree that the use of AI by the coffee retail shops has influenced their experience. A common benefit of AI in high speed of delivery of the services. AI is noted to automate tasks that can significantly reduce the waiting times of the customers and develop grounds for correct and speedy services, creating a positive impact on the experience of the customers. Similarly, 30 per cent of the responses indicate that the use of AI has influenced their experience at the coffee shops. It is seen that a total of 64 per cent of the responses attest to the fact that when AI is used, customer experience is influenced. The automated ordering system that is framed when AI is implemented ensures that the waiting times of the customers are reduced, and then there are

chatbots that provide automated customer service through replies that solve the queries of the customers. All these factors can be an important part of the seamless services that the coffee retail shops plan to provide to the customers to enrich their coffee experience. In contrast to this, 10 per cent of respondents strongly disagree that AI has been able to influence their experience in the coffee shops of the UAE. There can be times when the customers are not able to become accustomed to the new dynamics of the operations. These people generally are from the older generation who have developed a keen habit of human-driven services and hence AI-implemented services may not suit their overall perception.

Like this, 14 per cent of respondents disagreed, illustrating that AI has not been able to influence their experience. It is also important to note that there are customers who are less familiar with technology and hence their ability to access AI-based services is limited to an extent. For this reason, they may not be able to experience the services that have been implemented. 12 per cent of the responses of this semi-structured interview were neutral in nature. This means that the group of participants have no understanding whether the use of AI has influenced their experience at the coffee shops. This can be since these participants have been brought up in an already AI-established generation and hence they may not have experienced the services beforehand the application of AI. As a result, their responses have been neutral, depicting low understanding of the situation. Hence, when the insights from the semi-structured interview results are considered, it can be said that the role of AI in the present landscape is important part of the overall customer experience provided to the customers in the coffee retail shops
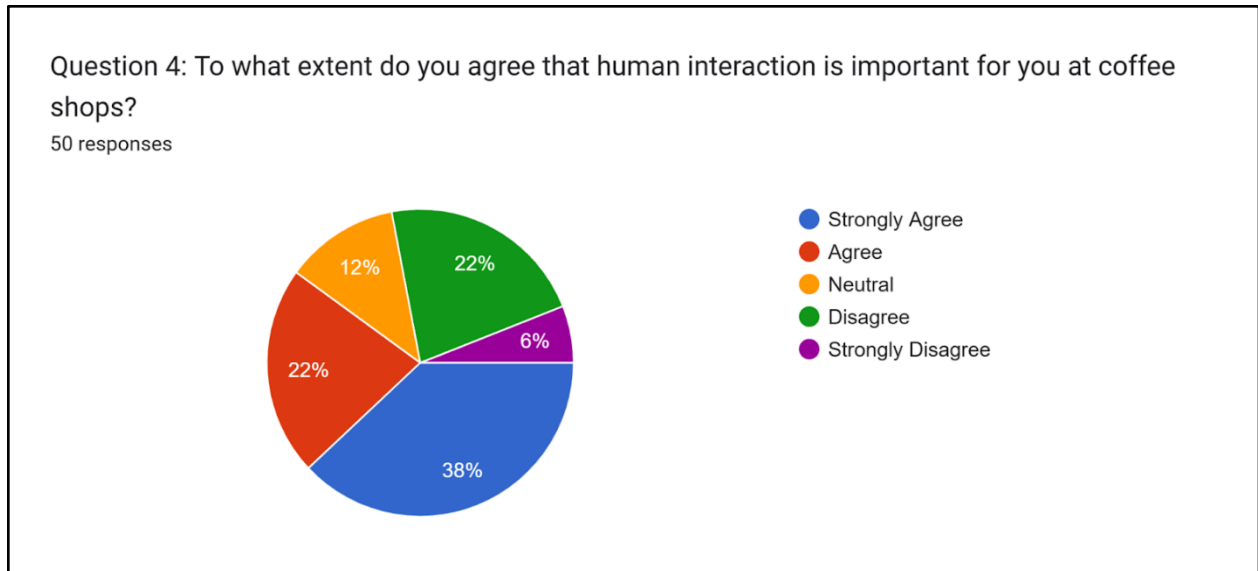
Figure 4.4: Response to Question 4

(Source: Self-Developed)

Despite the high integration of AI technologies in the operations of the business, the role

of human interaction cannot be undermined. It is an understandable fact that humans are the most

vital part of business operations. The flexibility and situational efficiency that humans can

provide may not be possible for machines to replicate the same. The major point that supports

this argument is the consideration of the emotional intelligence that is important in serving the

customer effectively and enhancing their overall experience. The fourth question of the semi-

structured interview was asked of the participants to understand the importance of human

interaction at the coffee retail shops of the UAE. In response to this, 38 per cent of the

respondents stated that human interaction was important for them in coffee shops. They

responded with strongly agree among the five other options provided. The strongly agree option

in this case shows an intensive assertion towards the importance of interacting with the human

servers and receptionists when in a coffee shop in the UAE. It is understandable that humans can

be more understanding towards each other while providing a higher level of flexibility, which

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can be the case for some customers. In the same context, 22 per cent of the customers agree with the notion, showing their agreement with the same. In total, it was derived that 60 per cent of the responses are inclined towards the importance of human interaction. The conversation and the basic interaction with the people in the coffee shops play an integral role in shaping the experience of the customers that cannot be replicated by AI machines. In this regard, human factors can be deemed to have an upper hand over the AI machines. The overall section can also be used to understand that despite the advanced technologies present and used in the businesses, the warmth and the personalised care provided to the customers by other human staff cannot be replaced or overpowered.

In contrast to the above responses, only 6 per cent of the respondents have strongly disagreed that human interaction is important for their experience at a coffee shop. The responses illustrates that these group of people may be introverted in nature that can impact their willingness to interaction with the people when purchasing cofree from the retail shops. As a result, the online automated order aligns with their nature allowing them to avoid human interaction. Like this, 22 per cent of the responses disagreed which shows support to the above inferences. 12 per cent of the responses on this question were neutral of nature indicating uncertainty among the participants in regard to having a clear understanding about the role of human in the retail coffee shops. This can be attributed to the fact that their experience may not have yielded significant situations where human interaction has influenced their experiences. The differences in the responses of the participants reflects the diversity in the preference of the customers in the UAE coffee retail sector. However, conclusively it can be stated that majority of the responses in this study have shown preference of human interaction in the retail coffee sector of the UAE.
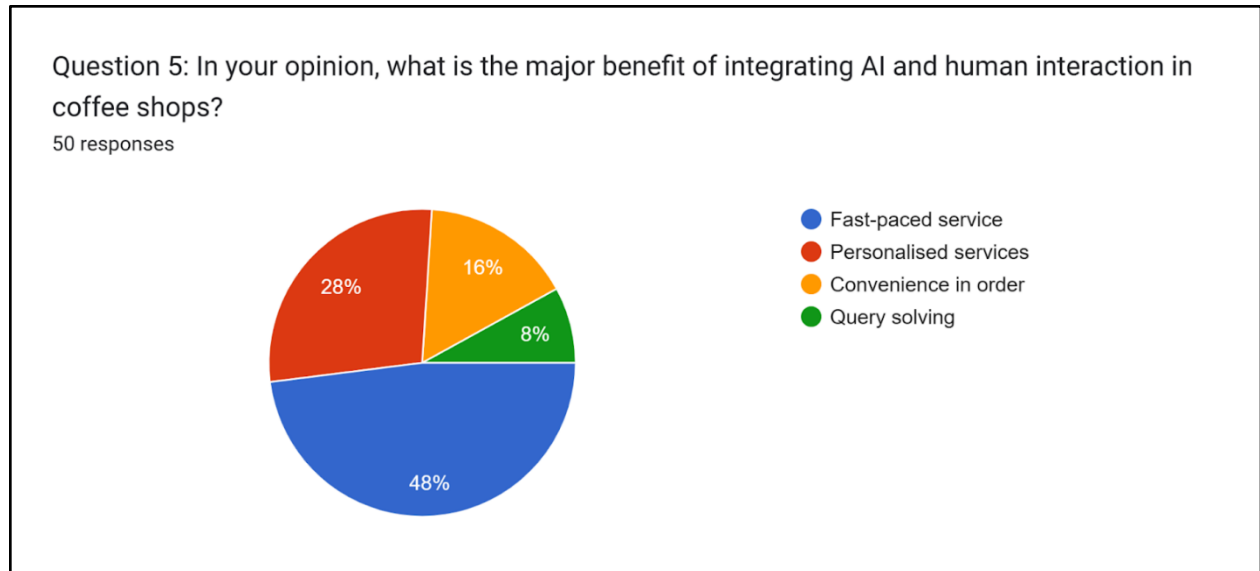
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Figure 4.5: Response to Question 5

(Source: Self-Developed)

It is common knowledge that the use of AI has enhanced the operations of businesses in the coffee retail sector. AI helps in developing capabilities and unearthing new strategies that are employed at the service of the customers, creating grounds for the enhanced positive experience of the customers in the UAE coffee retail shops. However, this study intends to explore the benefits that the customers have found regarding the use of AI in the coffee retail shops of the UAE, forming the rationale behind this question of the semi-structured interview. From the responses received in the semi-structured interview, it was seen that 48 per cent of the respondents stated that fast-paced services are one of the benefits of integrating AI with human interaction at the retail coffee shops of the UAE. The reduced waiting times of the customers due to the automated ordering system, where customers can preorder their coffee, can reduce the time of waiting at the coffee shops. As a result, the wastage of time is reduced, which is considered a benefit experienced by the customers. AI technologies such as integrated payment services also enabled customers in terms of paying through an online system that is quick, easy and

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convenient. When these benefits are considered, it is not surprising that such a large majority of the respondents have cited fast-paced services as a benefit of AI integration with human interaction. The use of AI also helps in predicting peak hours of the services, which can be helpful for the coffee retailers in planning their operations accordingly. From this, it can be understood that when AI is integrated with human interaction fast fast-paced services are provided that benefit the customers. 28 per cent of the responses were personalised services. It is seen that the use of data analytics was a major part of AI. Data analytics allows companies to understand and behaviour of the customers that can be utilised to send personal recommendations and messages related to relationship management. Companies have also been using this to provide tailor-made offers to specific customers, and as a result, the service feels more relatable to the customers, ensuring that personalised services are provided to the customer, directed to their specific needs.

Personalisation, when combined with human interaction, allows understanding the customers by considering their order history and regular orders that can be applied when interacting with the customers. This can make the customers feel valued and develop customer loyalty among them, benefiting the experience of the customers. 16 per cent of the responses also attested that the integration of AI with human interaction at the coffee retail shop of the UAE has eased the ordering process. People in the coffee retail sector can adhere to services such as self-ordering or ordering from a mobile phone and voice commands, reducing the effort of standing in a queue. As a result, ordering has become more convenient for the customers, and the presence of staff allows these customers to make sure that in any case of issues, they are well supported. When customers are provided with more control on their orders, they are more likely to feel satisfied and get a positive experience along which adds up to the high-quality support

and services from the staff. Hence for this reason, convenience in ordering has received much emphasis from the respondents as a benefit of AI integration with human in the UAE coffee retail sector. 8 per cent of the responses stated that query solving is the primary benefit that have been received from the AI and human integration in the coffee shops of the UAE. The responses illustrate the group of customers that prioritized communication and clarity. AI allows customers to get a quick response regarding their queries and issues, while human interaction can also be used for much complex queries. Human interaction along with AI provides an empathy-integrated quick response to the customers, allowing them to experience quick addressing of their issues. Hence, from the above discussion, it can be said that the integration of AI with human interaction has provided a range of benefits to the customers that includes, including convenience, fast orders, quick query resolution and personalised services.

Question 6: How much do you agree that the use of AI in coffee shops reduces the experience or human attention?
50 responses

- Strongly Agree
- Agree
- Neutral
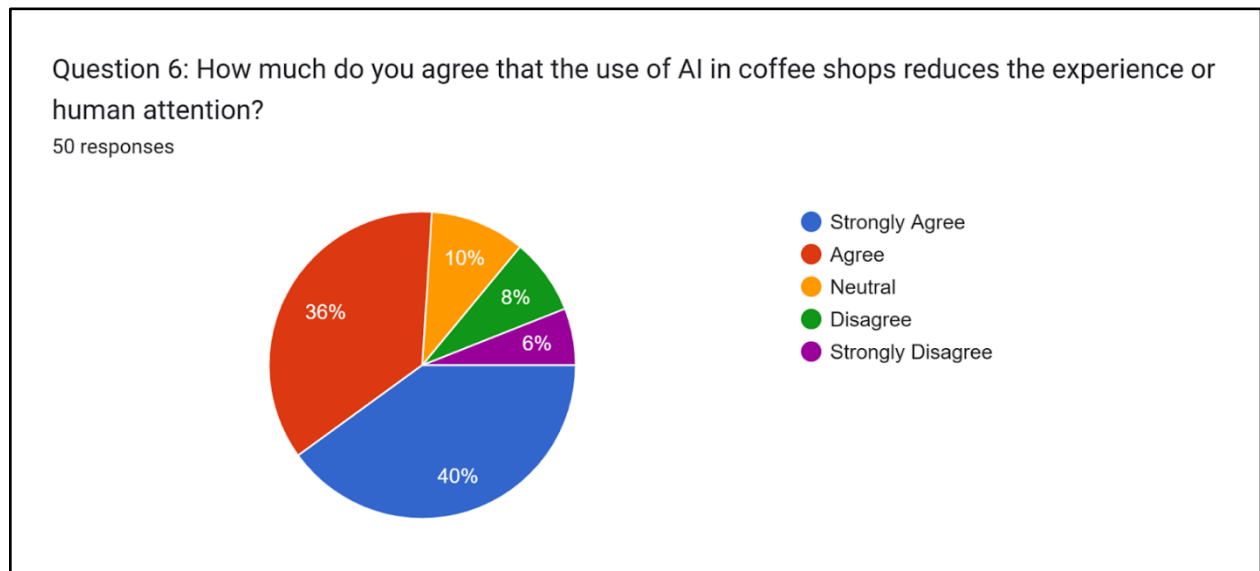- Disagree
- Strongly Disagree

40% · 36% · 10% · 8% · 6%

Figure 4.6: Response to Question 6

(Source: Self-Developed)

There are certain negative implications of AI that can affect the retail coffee sector of the UAE. It is understood that too much reliance on AI can reduce the human interaction, which is

vital in terms of dealing with customers by empathy and emotions. Furthermore, it is also important to note that AI does not have emotions or emotional intelligence that can allow it to act flexibly to the needs of customers by considering the circumstances. In this regard, the sixth question of the semi-structured interview was to understand whether the use of AI reduces experience or human attention in the coffee shops. The excessive use of AI in the coffee should reduce human attention in the UAE, and it has been attested by 40 per cent of the respondents. When AI is able to conduct most of the relationship management tasks, it is obvious that the focus on human staff can be reduced, and companies can reduce their staff. Furthermore, customers also avoid moving towards staff interaction that may affect their experience after a while. On a similar context, 36 per cent of the respondents agreed that the use of AI reduces experience and human interaction. This can be identified as a major risk of integration of AI that allows automation of tasks within the coffee retail industry of the UAE. 10 per cent neutral responses from the participants were received. This group of participants were unsure about the impact of AI in reducing human interaction that may affect their experience. However, however it may also be the case that this group of participants see both the cons and pros of AI integration and hence may be unsure about a decisive stand on this question.

6 per cent of the respondents strongly disagreed and 8 per cent disagreed on the set notion that AI in integration may hinder the interaction and their experience. This group of customers may be very accustomed to AI-integrated services and do not prioritise between AI and human interaction. The response also indicated that they think that the integration of AI has increased the efficiency of the coffee retail shops and provided better services to them. In this opinion, AI does not necessarily replace human services but adds to the capabilities that can help coffee retailers serve the customers better by enabling different automation and advanced

features. Hence, from the discussion, the major insights that have been derived are that the use of AI in excessive order can interfere with the prevalence of human interaction, which can affect the experience of customers who prefer human interaction when purchasing from the coffee retail shops of the UAE.
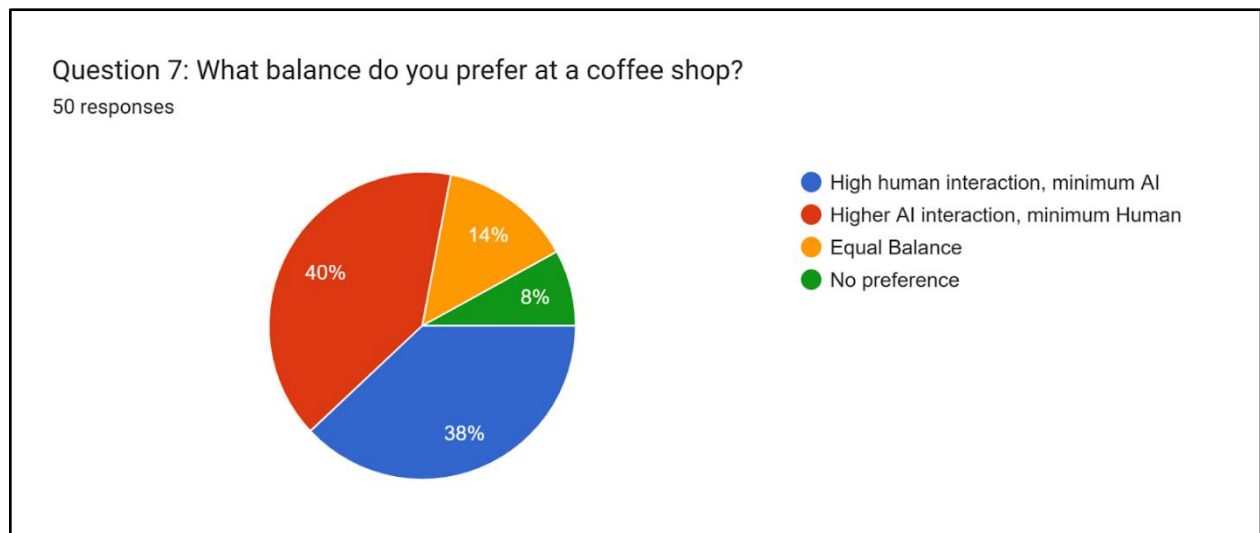

Question 7: What balance do you prefer at a coffee shop?
50 responses

- High human interaction, minimum AI
- Higher AI interaction, minimum Human
- Equal Balance
- No preference

14%
40%
8%
38%

Figure 4.7: Response to Question 7

(Source: Self-Developed)

Considering the benefits and the drawbacks of the use of AI in the coffee retail sector, there has been a debate about the balance of AI integration. The seventh question of the semi-structured interview was created to understand the customer preference about the balance between AI and human interaction at their coffee shop visit in the UAE. 40 per cent of the respondents have stated that they prefer AI interaction and minimum human interaction. The responses can be noted to be from the younger generation people who are more accustomed to the newer practices and facilities that have been formed using AI. This showcases the positive attitude of the customers towards technology that has allowed them to adopt voice assistants and online ordering systems that can enhance convenience and reduce waiting times. The desire for more AI can be linked to consistency and accuracy in orders and services. It is understandable

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that AI automates tasks that can reduce human errors, and hence, the accuracy of the service increases, resulting in enhanced customer experience. 38 per cent of the respondents prefer High human interaction and minimum AI. This indicates that a fair share of customers prioritises human warmth and conversation in the coffee shops of the UAE. Consumers who prefer a human touch and conversation while adhering to the traditional style of services have such responses. It also reflects the importance of human presence in the coffee retail shops of the UAE due to the presence of customers who are still inclined towards interacting with humans in their services. While it can also be understood that training these staff is also important so that they can provide empathetic services to the customers and meet their expectations.

14 per cent of the respondents want equal balance in their experience at the coffee shop in the UAE. It is understood that AI and human interaction allow a perfect balance of automation and human warmth that can provide an all-around service covering all aspects of the customer experience of the customers. A mixed experience where customers can preorder their coffee from the apps, and when they reach the coffee shop, they get it served by the staff with a greeting. This provides a complete mixture of machine and human regarding service to the customers. For this reason, a balance of AI and human interaction can be opted for by the customers. 8 per cent of the respondents have stated that they have no preference towards the balance between AI and human interaction. Customers can also be casual coffee drinkers who are not much involved in the dynamics of the coffee industry of the UAE or do not consider it as an important experience in their daily life. It also reflects that some portions of customers are flexible and the balance between AI and Human interaction may not be a major factor in their experience.
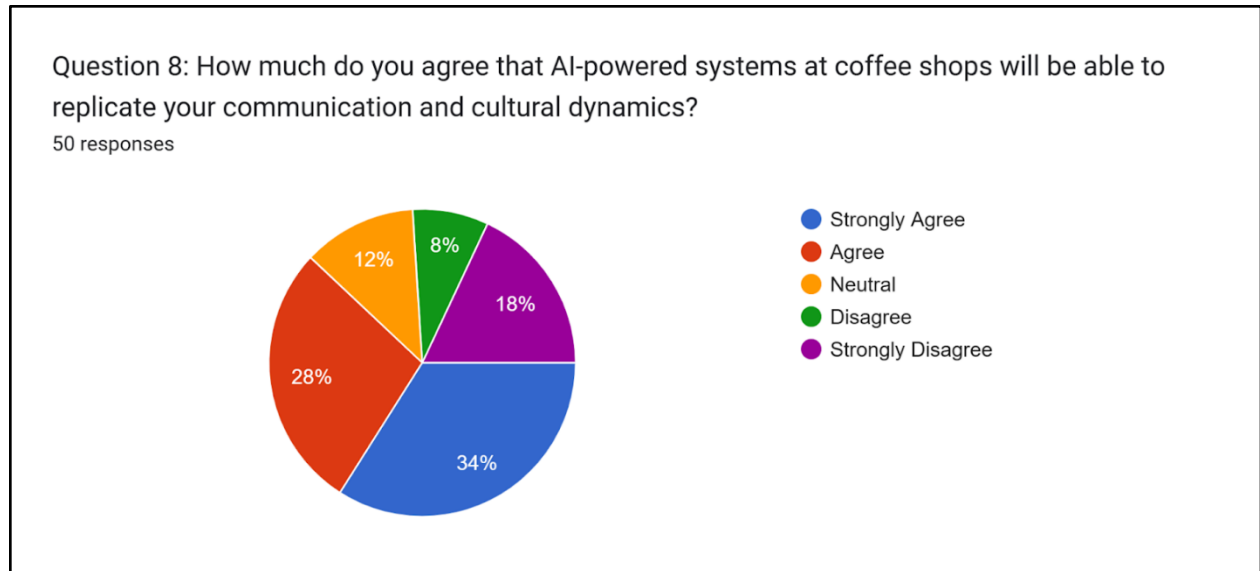
Figure 4.8: Response to Question 8

(Source: Self-Developed)

The aspect of cultural and communication is a major point of scrutiny when implementing AI in customer relationship management. In regions such as the UAE, the customers are highly sensitive to the cultural dynamics, and it can have a huge impact on their perception of the customers and their experience. 34 per cent of the customers in this regard have attested that the use of AI can help in meeting communication and cultural expectations of the UAE consumers during their transactions with the coffee shops. The language processing system has improved drastically, which can help the coffee shops in ensuring that the communication of the diverse customers is met. AI assistants are created in a way that can provide quick assistance to customers in specific ways, allowing clear communication and reflecting cultural values by initiating the conversation through greeting and cultural phrases that can make the conversation more realistic and aligned with the cultural dynamics of the UAE. 28 per cent of the response agree to the same notion that makes 62 per cent of all the respondents showcasing the trust level on the AI for managing their expectations and the experience. The agree option represents a low

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intensity, which means the respondents acknowledge the high capability of the AI system to handle basic transactional conversations and basic queries that can add to the experience of the customers. 12 per cent of the respondents were neutral in nature can be due to a number of reasons, including less interaction with AI. There are also customers who perceive the cultural aspect differently from their transaction in coffee making, their neutral nature. Furthermore, customers when not exposed to AI in cultural ideation and communication may also have a reserved opinion about AI's capabilities to replicate cultural conversations.

Strongly agreed was selected as a response by 18 per cent of the participants in this semi-structured interview. AI, in this case, can be seen as a pure machine that may not be able to capture and address empathetic needs in certain circumstances. These customers may think that culture is dynamic, and people are an important part of culture that cannot be imitated by a machine. Similar to this, 8 per cent of the responses disagree. The overall responses garnered can be used to understand that there is a portion of customers in the UAE who are not sure about the competency of AI to replicate cultural dynamics into conversations and automated replies. Hence from the discussion it has been seen that majority of the customers think that AI powered systems in the coffee retail shops will be able to demonstrate cultural sensitivity that can add up to their experience.
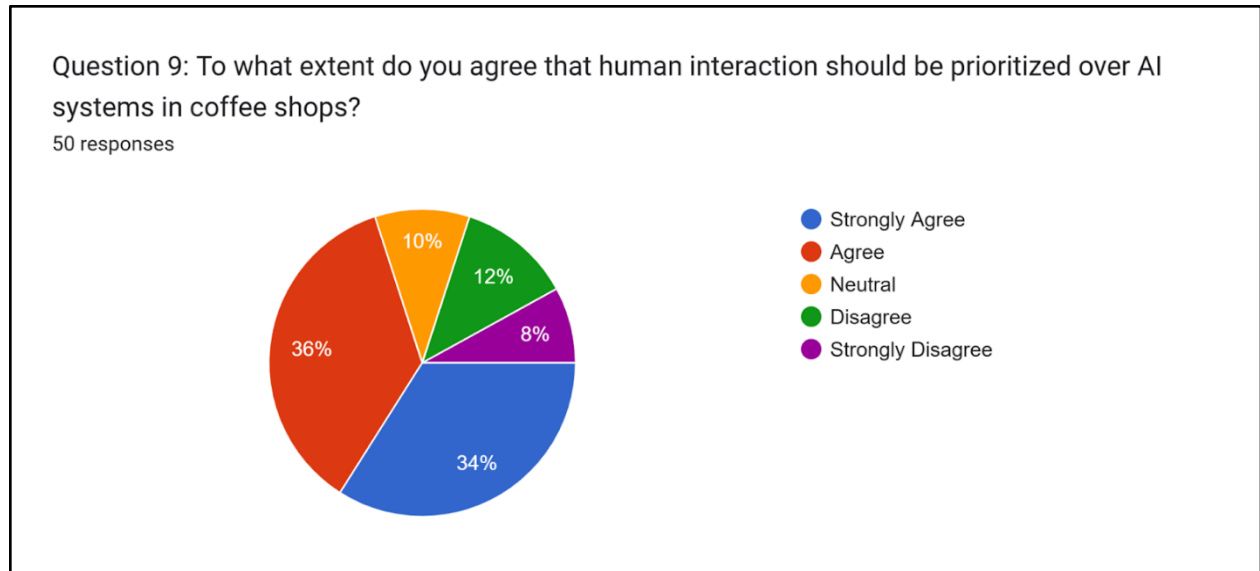
Figure 4.9: Response to Question 9

(Source: Self-Developed)

In context of this study, it is vital that understand that there is not competition between AI and human interaction. In fact, the study does not intend to conduct a comparison but understand the perception of the customers. In this question, the participants were asked whether human interaction should be prioritized over AI systems in the coffee shops of UAE. 34 per cent of the customers have strongly agreed that human interaction should be prioritized. When the responses from the previous questions are consider, this may seem contradictory. However, the responses reflect that the role of staffs and other human resources within the coffee shops are significantly vital. The responses can be due to other reasons such as loss of jobs and adjustment required where the people have become accustomed to daily interaction with the staffs and have developed a social relationship with them. As a result, they may not want a complete takeover of AI in the coffee shops affecting their willingness to accept a complete takeover of AI. Continuing with the same perspective, 36 per cent of the responses have agreed to the prioritization of human interaction over AI. This question clearly indicates that when it comes to

interaction regarding queries and issues customers in the UAE coffee retail sector prefer humans over automated machines.10 per cent neutral responses were recorded for this question, The neutral response may showcase that these customers may be more focused on delivery of the services rather than the form of interaction and hence human or AI interaction may not be a huge factor for them in their experience, creating a neutral stature in regard to his particular question.

8 per cent of the responses strongly disagreed which means that these respondents have the opinion of prioritizing AI due to their quick responses and automated replies. Similarly, the AI chatbots can be accessed using mobile phones and internet connection that can help gaining quick answers to the questions. Like this, 12 per cent of the respondents have disagreed. However, considering most of the responses it can be said that the consumers of the UAE coffee retail sector has voiced their opinion of prioritizing human interaction above AI interactions.

Figure 4.10: Response to Question 10

(Source: Self-Developed)

Overall, the semi-structured interview ends with a concluding question that seeks to understand the opinion o the respondents on whether the combination of AI and human can be

effective in providing quality experience to them in the coffee retail shops of UAE. 36 per cent of the respondents have strongly agreed to the statement. This can be attributed to the fact that when AI is implemented along with capabilities of the staffs it provides holistic advantages that enhances the quality of the services as well as the pace. AI allows increasing pace of the order while the presence of staffs allows the shops to retain humanly traditional values of the coffee shop. Consequently, it can be understood that the 36 per cent respondents have high prefer towards the integration of human interaction with the capabilities of AI. 36 per cent of the respondents on similar note have shown that human interaction with AI can be more effective in providing quality experience. A cumulative response stands at 70 per cent representing a huge majority towards the combination. 12 per cent of the responses have been noted to be neutral of nature. This response indicates a group of consumers who are not really concerned about the integration of AI into coffee shops but are rather focussed on drinking coffee. While this set of customers may also be highly adaptable reflecting neutrality. 8 per cent of the response disagreed and further 8 per cent were noted to strongly disagree. From the responses generated in the semi-structured interview it can be effectively inferred that the customers in the coffee sector of UAE prefer combination of human interaction and AI at disposal due to their ability to provide high quality services affecting the experience positively.

4.3 Summary

The generated response has showcased diverse perspectives which allows the research to enrich its findings, there has been demographic diversity which makes sure that all population group has had their share of perspective which makes the study very reliable and free from any bias in terms of demographics, it is found that AI can assist in faster delivery and error free services however, the human touch and warmth cannot be replicated. In this consideration

majority of the respondents have attested their desire to be availed a type of combined services that can make their experience more enhanced in terms of quality. The data collected from the application of semi-structured interviews has also showcased that there are two major customer groups in the UAE that prefer high AI integration with minimum human interaction, while another large customer group prefer human interaction and less AI interaction. The nature of the business shows that the adaptation of AI cannot be eliminated or avoided, which makes it important for the local coffee retailers in the UAE to adapt to the changing business dynamics and maintain an adequate balance between AI and humans so that the varied needs of different customers group can be done that can develop a strong customer relationship. Furthermore, the responses of the customers have showcased that AI has a strong influence on the experience of the customers that can be used to manage the relationship more effectively.

Chapter 5: Discussion

5.1 Introduction

The discussion chapter of the study is related to the comparison of the findings of this study with the existing studies. It is important that the findings of this study are compared to existing studies to ensure that the crucial findings of this study are identified and highlighted. The section of the study is also important in validating the findings that have been from the primary methods. The section is important in in interpretation of the findings of the research into the research context that can be further used to address the objectives. The theoretical perspective presented in the literature review section is also compared with the findings of this research, which adds to the validity of the research.

5.2 Discussing the findings with the existing studies

Comparison of the Findings with the Literature Review

In the literature review, section 2.2 it was mentioned that the human interaction AI hybrid model when used gives the highest level of customer support which was found by Bock et al., (2020) which is similar to the findings in the semi-structured interview in question 10 that was used to understand the customer's perspective on merging human warmth with AI will increase the satisfaction or not. Most of the candidates have agreed that using a hybrid customer service model is the most effective way to deliver a quality customer experience, accounting for 66% of the candidates. 16% of candidates have also disagreed that the hybrid model will not be optimum, which is reasonable, to some extent, some people don't understand the technology that much and integrating AI can add complexity for these types of people. Some people prefer human interactions in customer service because it's less routine and has that touch of familiarity. 12% of candidates were neutral about this, indicating they have no specific preferences about the

medium the which customer service is conveyed. In a similar finding in Question 3 about whether AI has influenced the experience of the customer candidates in a coffee shop, 64% agreed that integrating AI has influenced their experiences, though it wasn't clear whether it was for good or bad, but the majority experienced effects of the AI in coffee shops. Integrating AI have automated routine tasks so people would have felt how quick and easier it is now to book are order. It might be negative as it loses the human touch more complexity for non-tech-savvy people. In this finding, 24% of people have not felt any difference in customer experience even after integrating AI. 12% were neutral about the effects of AI.

In the findings, there was a mixed response from people, but the majority gave preference to a hybrid model. In literature, section 2.2, Challoumis (2024) stated that businesses are bound to adopt the cultural aspects in their AI system to keep the system fair and unbiased which is similar to the findings in Question 8 of the semi-structured interview which was aimed at finding the opinion of candidates on the capability of AI to adopt the cultural and communication dynamics where 62% of candidates agree that AI will be able to replicate the culture and communication dynamics. Considering how fast AI is advancing it may be possible to achieve this milestone where interaction with AI will be appropriate according to the culture in the UAE and other countries. Cultural and communication dynamics are very important for businesses to cater for the customers appropriately, so they don't insult them unknowingly. Integrating that into AI is tricky but important. 26% of candidates also believed that AI can't replicate these cultural and communication dynamics as AI at best for now, can have very limited conversation capabilities which often require human intervention when conversation goes beyond the specific scope of the AI and not all people are comfortable or can be catered to by the AI. AI can be taught to respond to a certain level to be appropriate but achieving complete

replication of communication and cultural dynamics will be a hard thing to achieve. 12% of candidates have stayed neutral, indicating they don't have any stance on the topic of whether AI can replicate the cultural and communication dynamics. In the literature, section 2.2 Huang & Rust (2021), have stated that customers have favoured human interaction more than AI. His studies show that human interaction felt more genuine and more flexible compared to AI. Similar findings were shown in Question 4 of the semi-structured interview which was framed to know the importance of human interactions in coffee shops. 60% said that it's important to have human interaction in coffee shops. The human touch is important in businesses dealing with people and serving them. Without humans involved, businesses can lose the connection and familiarity with customers and customers also don't connect to businesses that well.

28% of candidates disagreed with the importance of involvement in human interaction. People looking for quick and fast services without unnecessary hassle might want to avoid human interaction which can be error-prone compared to their AI counterparts. In coffee shops taking orders or booking appointments can be automated minimising human interactions, but orders will still be prepared by humans, so minimising the interaction at the first stage might make the work faster. 12% of people were neutral about the questions, not prioritising any of it. In the literature section 2.2, many benefits are mentioned by many people. (Tuğer, 2024) stated that AI can handle large volumes of customers at a single time, achieving efficiency in doing routine tasks, saving the time of human force to work on important things. Yang (2024) found that using AI, we can do predictive analysis to customise the services according to the customers, increasing their satisfaction, and customers are retained. Similar results were found in Question 5 of the semi-structured interview, which was framed to ask the customer which benefit they experienced the most after the integration of AI was done in coffee shops. 48% of people said the

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most benefit they got from AI integration was fast-paced services. AI made the business more efficient, reducing the routine tasks from humans, so that taking orders, basic customer services and be easily done by AI. The second leading benefit was personalised services, which were showcased preference by 28% of candidates in the semi-structured interview, as suggested by Davenport et al. (2020) in the literature review section 2.2, that using AI tools like predictive analytics and machine learning using the data of coffee shop can tailor the products according to each customer's preferences.

Personalisation is an important aspect as customer feels important when details about their choices are taken care of business. It increases brand loyalty, satisfaction, and customer connection to that business. The other two benefits experienced by the customers were the convenience of ordering by 12% of people and faster query solving by 8% both are examples of how efficiently AI can handle a large volume of customer base at the same time without causing any delays for customers improving customer experience when interacting with coffee shops for query or orders. In literature review 2.2, it was stated by Huang & Rust (2018) that using AI and human interaction together will lead to greater customer satisfaction and better customer engagement, but the findings in Question 6 in the self-conducted interview which asked to know from the candidates if using AI has reduced their experience and human interaction 76% candidates agreed that AI has hampered their experience in coffee shops that's a big number to give attention to by businesses maybe AI helps the coffee shops cut some cost but harming the experience can lead to reduced customer base which will eventually lead to loss in business. Coffee shops should fill in the gap by researching what customers are missing in the experience to provide the best services. THE AI-based CRM system is all based on the data that has been collected, processed and analysed by its system; even a small error in collecting data or

miscalculation can give irrelevant results, hampering the decisions. 12% of candidates disagreed that experience has been reduced by introducing AI to businesses. This segment has felt the benefits of the quick service and personalisation powered by AI. Other candidates must have liked the old school ways to order coffee, interacting with people, and having that connection with people there. 10% of people were neutral about their experiences. the findings revealed interesting data on customer experience regarding AI, which is heavily in opposition to AI, but there wasn't a clear picture of it being a mix of opinions and experiences.

In the literature review section 2.2, Rane, Achari, and Choudhary (2023) stated that the AI human model has raised concerns over a lack of human empathy, connection and satisfaction in businesses. the findings in Question 7 in the self-conducted interview, when asked about their preferences on which combinations they would like in coffee shops, have found that the candidates have very mixed preferences over how they want their services. 38% of the candidates prefer high human interactions and fewer AI interactions. These are the people who prefer human warmth over cold AI automation, even though coffee shops have routine tasks elimination of human force can make customers feel isolated or disconnected with the shop, as humans need some form of human interaction to connect with things. With a slight upper hand, 40% of people were in favour of more AI interaction and less human interaction. This indicates people like quick and fast services provided by AI CRM, as humans can often be error-prone and can't serve or provide service to many customers at once. So, according to the priorities candidates have, they chose human or AI; there's never one model fit for all that can be used in business, it's up to businesses what customer segment they want to target and what their coffee shop can cater best. Only 14% wanted an equal balance of AI and human interactions in the coffee shop.

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Achieving a balance between AI and the human workforce can be challenging, placing the correct type of system to achieve the best results can only be known after repetitive improvement from the feedback of customers. 8% had no specific preference about AI or humans; they were fine with any models that could provide them good services. In the literature, section 2.2, Shin & Cheng (2023) stated that AI can be fully dependent on for customer services in coffee shops as they can't fully understand the emotions of customers they are dealing with, this lack of emotional dependency can create a gap of understanding between customer and business about needs of customer. In Question 9 in the self-structured interview, when candidates were asked if they favour the human interaction over AI interactions, 70% were in favour of more human interactions, which is quite reasonable considering the lack of emotional intelligence in the AI and it's most suitable to do routine tasks then dynamic tasks that can be faced when interacting with customers. There's a lack of trust and awareness towards the use of AI in the general public. It is a new technology, and people take some time to adapt to it. AI-based CRM systems are heavily dependent on data collected, processed and analysed, but it's system errors or redundant data collection and analysis can cause issues in the results and lead to bad decision making. These systems aren't fully reliable, and fixing the error needs some expertise in the given domain, making it a complex task which can be avoided using a human workforce

20% of candidates were not in support of prioritising the human interaction over AI, indicating some people are adopting the new technology and getting used to it. Human interaction has its benefits same goes for AI in a coffee shop. Quick services that can be provided using AI can't be matched with human resources. The people who disagree with human interaction prioritisation must have quick services as one of the factors that they care about the

most. 10% of candidates were neutral about prioritising any of it if they get good and timely services. Appropriately balancing both is important, and it's up to businesses how they model their business, relying on appropriate resources to get the best out of it. The literature review section has shown as range of complexities related to the use of AI in the coffee retail sector. Chammassian & Sabatier (2020) have discussed that the implementation of AI has been attributed to high cost and more complexities in the operations. Integration of any new technologies can require infrastructural changes that can be detrimental to the operations in the initial few days, while the employees are also required to undergo similar training, else they can be a different in the present skill and the skill required to operate in the new work structure. In the findings section, the challenges faced by AI in the coffee retail sector have been explored as its inability to meet the cultural standards of communication. In the finding section, a cumulative 14 per cent of the semi-structured interview participants have illustrated that they think that the application of AI can reduce experience and human attention. In the semi-structured interview, there was a portion of participants who prioritised human interaction during their visit to the coffee retail shops in the UAE. In this consideration, these responses can be attributed to this set of customers. However, even for the generations that have a high interaction with AI, the interaction of humans can be significant in terms of providing them personalised support, which can be done through integrating AI as a source of information to understand their preferences and habits.

In the above context, findings from the previous study have shown that human interaction is important to create a comfortable environment for the customers in the coffee shop (Omar and Rashid, 2023). People in the UAE have a high sense of community, which means they are involved in social interactions. In a coffee shop setting, the traditional environment has humans

interacting and greeting the customers, which makes the customers feel a part of the community. The heavy reliance on AI can eliminate this human factor, making the services devoid of emotion, feelings and social interaction that can reduce the traditional essence of the coffee shop services. This does reflect the risk of being reliant on AI too much, which can compromise the traditional essence of the coffee shop, affecting the experience and expectations of a group of coffee retailers in the UAE. Continuing with this, the findings of the research have also explored the balance that should be maintained by the coffee retailers in the UAE for ensuring that the experience and the expectations of the consumers in the UAE are not compromised. In this regard, the findings of this research have explored the balance between the integration of AI and humans. In the findings section, 40 per cent of the responses were noted to prefer higher AI interaction and minimum human interaction. Contrarily, the respondents who were noted to prefer higher human interaction and minimum AI interaction stood at 38 per cent. There is not much difference between these customer groups in the UAE coffee retail sector. The responses can be used to determine the perspective that the integration of AI and human interaction at coffee is the best strategy for the coffee retailer in managing customer relationships. AI can help in addressing the drawbacks of human services by eliminating human errors, while the presence of humans can help in ensuring that human warmth is maintained. From this, it can be inferred that the role of AI and humans when integrated in the coffee retail sector can be crucial in providing an all-around service to the customers.

The study also explores critical factors that as been benefiting the coffee retail shop in the UAE, allowing them to provide an improved experience to the customers. The four benefits that were the outcome of the findings included fast-paced services, personalised services, convenience in order and query solving. In the literature review section, Prasanth et al. (2023)

illustrate that the capabilities of AI allow businesses to make informed decisions. AI, through the use of data analytics, can provide critical insights about the customer purchase patterns and behaviour that can be used to provide personalised recommendations and offers, making the services cater to the individual needs of customers. Besides, AI allow providing the option to automate some tasks that can increase the speed of the services and eliminate any errors. The elimination of errors and increased speed of services can be a vital component in increasing the overall quality of the services as well as the experience of the customers, as they would be required to wait less for their order and encounter fewer mistakes. The findings of the study have shown that query solving reflects the efficiency in customer service which is an integral factor in managing customer relationships. Customers can face a range of complications and issues when interacting with a coffee retailer. Human staff may not always be available, considering there are also orders placed from home. In this case, AI allows the coffee retailers to delegate chatbots that can automate replies to the queries that are delivered to the customer quickly. This allows the coffee retailers to provide quick assistance to the customers. However, the automated replies may not consider the context of the problem, acting as a limitation in addressing customer grievances. In this continuation, it is important that human staff are made involved in the process, who can serve and address the customer accordingly to the context. Hence, there is a strong case for human integration with the AI services for providing an experience to the customers of the coffee retail sector in the UAE that covers all facets.

The research during the findings also explored the influence of AI on the experience of the customers in the coffee shops. A cumulative 64 per cent of the customers believed AI has influenced their experience. AI has been widely integrated in various fields to enhance the operations that can positively create a better experience for the customers. When customers

experience a seamless interaction where there are no complications or barriers, it can develop a positive perception towards the brand. Customers who have a preference towards a brand are easier to manage, and hence they can be more easily influenced to be retained, which is the main objective of customer relationship management. In the literature review section, Reis (2024) has discussed the use of predictive analysis in the business process to ensure that businesses can be made aware of the trends and behaviour of the customers in future, allowing them to be prepared in advance. The advanced knowledge also provides enough time to develop and plan their operation to tackle change and meet the changing requirements of the customers. The basic nature of AI when used by the business is shown to have a positive impact on the experience of the customer, which has been carried forward in this study. In the UAE, the coffee retailers are also very proactive in ensuring that relevant technologies have been integrated so that the experience of the customers can be enhanced. When compared to the coffee retailers with less technology integration, it can also be assumed that technologies such as AI provide an edge in terms of competition.

Theoretical interpretation

The social presence theory states that different channels of communication have varying abilities to develop a psychological sense towards another person (Bakker, 2022). The theory posits the importance of interacting with another person. In the findings of the research, it has been shown that 38 per cent of respondents have stated that they want service in the coffee retailers' sector of the UAE that is inclined towards a more human factor. This means that the interaction with human staff is considered an important factor for these customers. Throughout the study, it has been demonstrated that the traditional coffee retailers have effectively utilised the interaction of the staff with the customers in developing a strong customer relationship. This

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has also been demonstrated in the findings, where customers have stated that human interaction is vital for them during their visit to the coffee shops in the UAE. The traditional customers cannot effectively be satisfied and addressed through AI, considering their unique complications and grievances, along with their accustomed services being delivered by human staff. AI also has limitations regarding emotional intelligence and empathy that can be factors utilised by staff in handling complex grievances effectively. When this perspective of the theory is considered, it can be understood that the presence of people in the coffee retail shop can be important in terms of having empathic service that uses emotional intelligence. The interaction that customers can have with the staff can help in developing a relationship, which can make the customers visit the same coffee retail shop more often to converse. This building of customer loyalty and retention reflects effective customer relationship management. Hence, from the explanation, it can be said that the findings of this research have been validated by the perspective of social presence theory.

The equity theory in the literature review section states that the adaptation of AI should be done by considering the extent to which it is fair. The theory is also of the opinion that AI can be very vulnerable to cultural bias that can affect the experience as well as the satisfaction level of the customers (Khan & Mishra, 2024). The findings section of the study has explored the balance between AI and human interaction that is preferred by the customers of the coffee retail sector of the UAE. per cent of the responses supported high AI interaction and minimum human interaction, which contradicts the 38 per cent of the respondents who have showcased their support for maximum human interaction and minimum AI interaction. 8 per cent of responses showed no preference, while 14 per cent wanted a balanced approach. The findings indicate that AI and human interaction are both vital; however, the balance can help retailers ensure that all

aspects of the customer experience can be met. Retailers and note down the behaviour and patterns of the customers and identify which group of customers prefer AI or human interaction at most. This can be considered in the service delivery, allowing personalisation of the services and ensuring that all diverse demands of the customers are equally addressed. When the perspective of the theory is considered, it can be said that a balanced approach is promoted. The balanced approach allows the coffee retailers in the UAE to meet the demand of different generations that have taken part in the semi-structured interview. It has been seen that the semi-structured interview has consisted of participants from different age groups, and the responses as a result have made the study develop insights that are very relevant to the diverse needs of the customers in the UAE coffee retailers, which consist of high variances.

Similarly to the above theoretical perspective, the study has utilised the theory of reasoned action to understand the perspective of the customers in the context of this research topic. The theory of reasoned action states that the actions of customers are determined by subjective norms, attitudes that collectively influence their decisions to purchase and act (Pryor 2022). AI is a widely adopted technology in different business fields and is used by customers all over the world for their convenience. AI in this aspect can be said to be aligning with the needs of the customers due to high convenience. This can be confirmed in these research findings where the majority of the respondents prefer AI over human interaction. The findings of the research have also shown that the AI has enhanced the level of convenience in terms of query solving, fast-paced orders and personalised services. The services in this regard can be attested to be beneficial, making the customers avail themselves to a range of benefits that can form the grounds of a better interaction relationship with the coffee retail brand. Besides, when online orders and chatbots are widely customers also develop an attitude where they demand the same

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from their brand due to being in competition in society. They also want to experience customer support and automated replies powered by AI. The dynamics of the theory of reasoned action can be said to be important in terms of understanding that the AI trend has influenced the customers in expecting the same level of convenience in their orders at the coffee retail shops. Summarising the section, it can be inferred that the findings and insights generated in this section of the study have reflected the working of the theory of reasoned action.

5.3 Summary

From the discussion of the findings, the research has demonstrated the importance of AI in the coffee retail sector. However, the essence of human interaction cannot be determined. It is seen that when there is adequate balance between AI and human interaction, it ensures that the coffee retailers in the UAE are well equipped to address the varied needs of the customers with different characteristics. The findings of this study have complied with the social presence theory and the theory of reasoned action. AI is an important component in the current business context, delivering high-quality service that can help in managing customer relationships.

Chapter 6: Conclusion

6.1 Overview of the study

The research was conducted to understand the integration of human factors and artificial intelligence for customer relationship management practices in the UAE coffee retail sector. In the introduction section of the section, it was demonstrated that there has been an increased use of AI in different sectors of businesses, which showcases that the use of AI can be conclusively used in the coffee retail sector for the purpose of customer relationship. The coffee retail sector has also shown prospects of increased growth, which means that more customers are expected to interact with the sector in the upcoming days. This provides businesses in the sector to integrate AI with the human workforce to ensure that they can provide optimal services to their customers, allowing them to capitalise on the growth opportunities. The section has also introduced the objective and the research question that have acted as the guide in the overall development and progression of the research. The objectives depicted the study will also touch on the aspects of customer engagement and satisfaction level, and the challenges in adopting AI in the CRM practices have also been taken as an important factor that can be considered. Furthermore, the chapter also introduced the objective to develop a recommendation that can allow proper integration of AI with the human factor, contributing optimisation of customer relationship management practices in the coffee retail sector of the UAE. The major assumption that has been considered when conducting this research was that the AI and human factors are complementary to each other.

Chapter 2 of the research delved into the existing studies for the development of knowledge regarding the subject area. It has been found that the use of AI can make companies and businesses face a range of ethical issues related to data privacy. AI to be effectively utilised in customer relationship management, requires customer data, which makes it very vulnerable to

being exposed to breaches, resulting in privacy issues. On the other hand, the use of customer data can be vital in terms of understanding patterns and trends of their purchase, which can be vital in providing them personalised services. While the section has also demonstrated challenges such as high cost and complexities faced by businesses when adopting advanced technologies such as Artificial Intelligence. The section has demonstrated that the use of AI has a direct impact on the satisfaction level of the customers and increases their engagement level. Besides, theoretical perspectives have been developed using theories such as equity theory, theory of reasoned action and social presence theory. The section has also demonstrated that the existing literature has lacked precise focus on the UAE's coffee retail sector, which has been intended by this particular research to be addressed. The section has helped in understanding that AI can be limited in terms of reflecting cultural norms and cultural sensitivity due to automation and a lack of emotional intelligence and empathy. From this, the chapter was important in exploring the current perception of the subject that can be used in this research for further progression.

Chapter 3 of the study discussed all the stages that the research explored to develop a method that suits the nature of the study and can help in meeting the research objectives. In this section, it was demonstrated that this research has opted for an interpretivist research philosophy due to its ability to consider subjective aspects, which aligns with the nature of the study. The interpretivism philosophy can contribute to the deeper understanding of the study and hence has been selected. A deductive approach has been selected as it can allow the research to incorporate theories that have already been validated, allowing the research to generate inferences that are already backed by theories. In terms of design, a descriptive design has been applied which suits the qualitative nature of the study and can help in understanding the factor of customer relationship management in regards of Human interaction and AI integration. This can be very

suited to meet the objective of the research and answer the research questions. A semi-structured interview research strategy was used along with a purposive sampling method to select participants for this research. 50 participants were selected who were invited through a Google Forms link to take part in a semi-structured interview where responses were pre-set. Besides, the generated responses were interpreted through graphs that are automatically generated. This has allowed the researcher to include graphs of the findings, resulting in a visualisation that can contribute to enhanced understanding and better presentation of the study. Furthermore, certain ethical considerations were maintained, which included taking consent and making sure that the participants were well informed about their right to opt out of the study at any point in time. The research has adhered to encryption and made sure that no personal information of the participants was shared or exposed during the data presentation.

Chapters 4 and 5 of the study were results and discussion that presented the collected data and then conducted a comparison with the previous literature findings. It has been demonstrated that the role of AI in customer relationship management is huge. It has been demonstrated that the customers in the UAE have been hugely influenced by the use of AI in the coffee retail sector. It has benefited them in regard to convenience and past faced order. Continuing with this, the research has also demonstrated that it is important to maintain a balance between AI and Human interaction, as there are 40 per cent of the customers who prefer AI and 38 per cent who prefer human interaction. Both responses are close to each other and hence cannot be ignored. Collectively, 76 per cent of the responses have also attested that the use of AI significantly reduces human attention, which affects their experience. The discussion section of the study has demonstrated that the findings of this study have complemented theories such as the theory of

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reasoned action, equity theory and social presence theory. Overall majority of the findings in this study has reflected back to the findings from the previous literature.

6.2 Linking with objectives

Linking with Objective 1: ***"To analyse the impact of AI-human CRM integration on customer engagement and satisfaction in the UAE's retail coffee sector"***

The first objective of the study was to conduct an analysis regarding the impact of AI-human integration on the customer engagement and satisfaction level in the coffee section of the UAE. The literature review section in this case have revealed that AI is a potent tool that can contribute to the ability of the businesses to understand the behaviour of the customers and further provide them personalised offering that can be more satisfactory. The chapter of literature review have also showcased that AI can help in increasing the level of convenience by automating tasks and reducing human errors that adds up to its ability to enhance satisfaction level among the customers. Predictive analysis can be done by AI powered system, increasing transparency level of customer understanding by the coffee shops. On the other hand, the findings of the study have showcased that there is a range of benefits that can be gained when AI is integrated with human interaction. The response of the participants has depicted that human interaction is important for them and the use of AI has enhanced their experience. Hence when the insights generated from the literature review and the findings section of this research is taken into consideration, it can be said that the human interaction and AI-integration has a rapid impact on the experience of the customers and their satisfaction level. This can prove to be a vital cog in the customer relationship management of the customers in the UAE coffee retail sector. Hence, it is seen that the objectives have been addressed in this study.

Linking with Objective 2: ***"To identify key challenges and benefits of hybrid Al-human CRM models"***

The second objective of the study was for identify the challenges and the benefits related to the use of hybrid AI and Human customer relationship models in the coffee retail shop of UAE. From the exploration of previous studies, it is understood that AI uses data and information related to the behaviour of the customers. This can increase the risk of data breaches where the personal information of the customers is at risk. It is also seen that AI technology is costly and can be complex to be inducted as it may require employee training. On the other hand, the findings of the study have shown that when AI in integration it reduces experience and human attention. The coffee customers in the UAE are noted to be highly entitled towards interaction with the staffs when visiting coffee shops. AI through it automated task can replace staffs that can be a challenging aspect of Hybrid AI-human CRM models. In terms of benefits, the literature review section has found that AI has been related to a range of benefits that includes automation of tasks, reduction of human errors, increased customer satisfaction and high level of customer engagement. AI also provide predictive capability which means coffee retailers can predict the behaviour and choices of the customers and make decisions accordingly. The findings section has identified that when human AI hybrid model is implemented it allows customers to experience fast-paced order through AI system and query solving where the AI chatbots can effectively provide quick answers to the customer in case of urgency. While AI ensures that staffs are availed with the records and information about the customers that visits regularly that can be used to serve them on a personal level. This demonstrates high level of personalisation for the customers contributing to enhanced satisfaction and effective management of relationships. Hence this shows that the study has effective discussed and

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presented challenges and benefits of AI integration with human interaction models which is an indication that the objective set in the initial stages of the study has been met.

Linking with Objective 3: ***"To develop a framework for balancing AI automation and human interaction in CRM practices"***

The third objective of the study was framed to develop a framework that can be effectively used to balance the AI automation and human interaction in CRM practices. In the literature review section, employee training has been demonstrated as a factor that can assist in allowing employees in developing competency and capabilities to match up with the AI and ensure that AI does not overpower them in the coffee retail shop that can make the services very one dimensional. In the findings section of the study two major group of respondents have voiced their opinion regards prefer AI based services and human interaction respectively. 14 per cent of the respondents have also stated that there want to have a balanced experience. This has depicted an understanding that the coffee retailers need to have right mix of AI and human interaction at their services allowing to address the needs of different customers. It is also important to note that a slight number of respondents have shown no preference towards any. As a result, when a balanced approach is adopted, it will allow the coffee retailers in the UAE to address the service expectations of the customers accordingly. This indicates that a framework has been developed which ensures that the objective has been met.

Linking with Objective 4: ***"To examine the role of cultural sensitivity in AI-powered CRM systems"***

The last objective of the study investigated the role of cultural sensitivity in AI-power CRM systems. The study has demonstrated that people in the UAE are highly sensitive to their culture and it has been demonstrated in the literature review section that cultural sensitivity in

important for the customers experience. When the services do not align with the concept of cultural sensitivity is can have a negative influence on the experience and the customers may have their feelings hurt affecting the relationship with the brand. The findings of this study has shown that respondents think that AI can be able to reflect the cultural sensitivity of UAE customers effectively. AI conversations can be altered in a way that can be very friendly in nature and reflects the cultural norms and practices ensuring that the customers have been communicated by maintaining their cultural norms. It is also important to note that the findings section has shown that the role of human interaction is topmost efficient in addressing the cultural sensitivity. Local staffs have natural behaviour that reflects the culture and norms making the customers in the UAE coffee retail shop more culturally home. Hence, from the insights presented it is evident that the study has affectively discussed cultural sensitivity in regard to UAE coffee retail sector. As a result, the objective has been met in this study.

6.3 Recommendations

Recommendation 1: Coffee retailers can use predictive analysis and plan service accordingly

The findings of the study have shown that adequate balance of AI and human interaction is important in ensuring that the needs and the requirements of the services of the customers are addressed. In this regard, predictive analysis can be used to understand the behaviour of the customers and determine their preference of AI or human interaction accordingly. This can be used by the retailers to plan their services accordingly allowing them to manage the relationship with customers with utmost efficiency.

Recommendation 2: Integrate AI and human models to address cultural sensitivity issues

The role of culture is also important for the retailers in terms of ensuring that relationship management practices have been facilitated. In this regard an AI and Human model integration can ensure that cultural norms are maintained. The local staffs are more aware about the social norms and culture which makes them more capable of addressing the customers in accordance with the culture dynamics. Furthermore, the efficiency can further be enhanced in where the customers can be more understood by use of data analytics and predictive analysis. From this it can be said that the integration of AI with human model can be vital in addressing cultural sensitivity in the UAE.

6.4 Future Scope

Future scope of the research is area that has been unearthed to explore from this study. In this research, the coffee retail sector of UAE was focussed and in future research different middle east region such as Kuwait or Qatar can be explored allowing generation of different insights. The research has applied qualitative semi structured interview where responses were preset, and participants were required to choose from the options. In future study can be conducted where an open-ended interview is used where the participants can provide more enriching insights regarding the subject area. The research has considered the insights of customers allowing a scope for future research where the insights of operations can be inducted by selecting managers as participants in the interview process. Furthermore, study can be conducted by adopting different research designs such as secondary research that allows including real life business examples.

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Appendices

Appendix 1: Interview Questions

Question 1: What is your age?

- 18-25

- 26-35

- 36-45

- Above 45

Question 2: What is your gender?

- Male

- Female

- Prefer not to say

Question 3: How much do you agree that the use of AI tools have influenced your experience in a coffee shop?

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

Question 4: To what extent do you agree that human interaction is important for you at coffee shops?

- Strongly Agree

- Agree

- Neutral

- Disagree

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- Strongly Disagree

Question 5: In your opinion, what is the major benefit of integrating AI and human interaction in coffee shops?

- Fast-paced service

- Personalised services

- Convenience in order

- Query solving

Question 6: How much do you agree that the use of AI in coffee shops reduces the experience or human attention?

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

Question 7: What balance do you prefer at a coffee shop?

- High human interaction, minimum AI

- Higher AI interaction, minimum Human

- Equal Balance

- No preference

Question 8: How much do you agree that AI-powered systems at coffee shops will be able to replicate your communication and cultural dynamics?

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

Question 9: To what extent do you agree that human interaction should be prioritised over AI systems in coffee shops?

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

Question 10: How much do you agree that a coffee shop that combines human warmth with AI convenience will be more effective in delivering a quality experience to you?

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

Appendix 2: Cross Mapping Table

Objectives	Interview Question to address the objective	Number of participants
Demographic characteristics of the participants	● **What is your age?** ● **What is your gender?**	50 Participants
"To analyse the impact of AI-human CRM integration on customer engagement and satisfaction in the UAE's retail coffee sector"	● **How much do you agree that the use of AI tools have influenced your experience in a coffee shop?** ● **To what extent do you agree that human interaction should be prioritised over AI systems in coffee shops?** ● **How much do you agree that a coffee shop that combines**	50 Participants

	human warmth with AI convenience will be more effective in delivering a quality experience to you?	
"To identify key challenges and benefits of hybrid AI-human CRM models"	● How much do you agree that the use of AI in coffee shops reduces the experience or human attention?	50 Participants
"To develop a framework for balancing AI automation and human interaction in CRM practices"	● What balance do you prefer at a coffee shop?	50 Participants
"To examine the role of cultural sensitivity in AI-powered CRM systems"	● How much do you agree that AI-powered systems at coffee shops will be able to replicate your communication and cultural dynamics?	