Influence of Ease of Use and Trust of Artificial Intelligence on Customer Retention: A Study of Dublin's Hospitality Industry

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ABSTRACT

This research explores the dynamic role of Artificial Intelligence (AI) in shaping customer retention strategies within Dublin's hospitality sector, focusing on two pivotal factors: the ease of use and trust in AI technologies. Utilizing a quantitative methodology, the study systematically gathers and analyzes data from patrons of various hospitality services across Dublin who interact with AI-driven tools. The objective is to discern how these two elements influence customer decisions to revisit and maintain loyalty to service providers that employ AI technologies.

The findings from the regression analysis provide a robust statistical foundation for understanding the impact of AI on customer retention. The results indicate that ease of use of AI tools explains approximately 41.8% of the variance in customer retention, highlighting the significance of user-friendly interfaces in fostering positive customer experiences. Meanwhile, trust in AI accounts for 45.5% of the variance, underscoring the critical role of reliability and security perceptions in the acceptance and continued use of AI services.

Further examination reveals that while ease of use and trust are significant, they do not fully account for all aspects of customer retention. This gap suggests the influence of other factors such as quality of service, personal interaction, and overall customer satisfaction, which also play substantial roles. This study discusses the interplay between technological attributes and traditional hospitality values, proposing a balanced approach to AI integration that enhances service delivery without compromising the personal touch essential in the hospitality industry.

The research concludes with practical recommendations for stakeholders in the hospitality industry aiming to implement AI technologies. It emphasizes the importance of developing AI systems that are not only technologically advanced but also align closely with user expectations and industry standards. By doing so, businesses can ensure that AI tools enhance, rather than detract from, the customer service experience, thereby boosting customer retention and competitive advantage.

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Chapter One

Introduction

This chapter provides background information on the study's key concepts, which include customer retention, artificial intelligence, and customer retention, artificial intelligence in the hospital industry, ease of use, and trust in AI. The chapter also includes the identified literature gap and rationale for the current study, as well as the dissertation's research question, objectives, hypotheses, and structure of the dissertation.

1.1 Background of the Study

Artificial intelligence (AI) is defined as technology that allows computers to understand and imitate human intelligence (Jeon & Suh, 2017; Hassani et al., 2020). According to Uzir et al. (2021), it is the use of machine-taught applications or programmes to mimic the human brain in decision-making processes. Other studies have described AI as a technology associated with high-level cognition that allows it to innovate and generate solutions that aid in problem solving and goal achievement (Langley, 2011; Collins et al., 2021). In recent years, AI and AI-based technologies including machine learning, content creation, natural language, image and speech recognition, service robots, cyber defence, chatbots, recommendation systems, virtual assistants, easier checkouts etc have grown and penetrated various industries including the hospitality industry due to their transformative potential (Reddy et al., 2019; Nagy & Hadjú, 2021; Chen et al., 2022; Frank & Otterbring, 2023). According to studies, one significant transformation ability of AI is its ability to attract and retain customers, which is a critical factor for sustainable business growth in today's highly competitive business landscape (Kumar et al., 2019; Yau et al., 2021; Aguiar-Costa et al., 2022; Singh et al., 2023). The retention of customers according to studies is achieved by AI revolutionising the interactions of businesses with their customers, enabling businesses to personalize the experiences of customers, providing insight into the preferences and purchasing patterns of customers such that businesses can use the insight to improve the products and services they offer to customers among other innovative strategies (Mclean & Osei-Frimpong, 2019; Cabrera-Sanchez et al., 2021; Frank et al., 2023; Singh et al., 2023).

It is important to note that the use of AI in industries, including hospitality, is not limited to business owners; customers can also use AI tools such as recommendation systems, chatbots, easier checkouts, image recognition, and so on (Wang et al., 2023). However, two factors, ease of

use of AI and trust in AI, may have a significant impact on how well customers accept and adopt AI and its technologies, and thus affect customer retention, among other benefits that businesses stand to gain from implementing AI in their establishments. It is on this note that this study seeks to investigate the influence of ease of use and trust on customer retention using Dublin's hospitality industry as a case study. Previous studies have investigated the influence of ease of use and trust in customers' adoption of AI (Belanche et al., 2019; Rahman et al., 2023; Wang et al., 2023) and the impact of adoption of AI on customer retention in the hospitality and other industries (Kumar et al., 2019; Al-Hyari et al., 2023; Devi & Lakshmi, 2023); however, there is a lack of academic literature on how customers' ease of use and trust in AI influences retention, making it important for this study to be conducted. Furthermore, the recent growth in the UK hospitality industry (16.42 billion pounds in 2022, up from 11.28 billion pounds in 2021, with further growth expected) has resulted in increased competition among industry businesses in the bid to attract and retain customers, emphasizing the importance of this study (Statista, 2024). The hospitality industry of Ireland is of significance, contributing over 7.6 billion euros to the economy, with Dublin making up a substantial part of this contribution (PWC, 2020; Deloitte, 2023). By examining the present topic, this study will determine whether there is a relationship between ease of use, trust, and customer retention. In addition to filling a literature gap, this study will add to existing knowledge and provide actionable insights for businesses looking to successfully use AI for customer retention in the hospitality industry.

1.2 Research Questions

Does the ease of use and trust in Artificial Intelligence (AI) influence customer retention in Dublin's hospitality industry?

1.3 Research Aim

To investigate how ease of use and trust in AI impact customer retention within the hospitality sector of Dublin.

1.4 Research Objectives

1. To assess how easy consumers find the use of AI.
2. To evaluate customers' level of trust in AI.
3. To investigate the influence of customers' ease of use of AI on customer retention.
4. To investigate the impact of customers' trust of AI on customer retention.

1.5 Hypotheses

H1: Consumers find the use of AI easy.

H2: Consumers have trust in AI.

H3: Customers' ease of use of AI has a significant influence on customer retention.

H4: Customers' trust of AI has a significant influence on customer retention.

1.6 Dissertation Structure

This dissertation is divided into five chapters, each of which aims to investigate the impact of Artificial Intelligence (AI) on customer retention in Dublin's hospitality industry. The introduction establishes the context by outlining the research background, questions, goals and objectives, and hypotheses for the study. This is followed by the literature review chapter, which delves into previous studies on the investigated topic as well as the theoretical foundations that underpin the study. The third chapter, methodology, discusses the research design, philosophy, and approach. The methodology chapter will also cover the sample size and sampling techniques used, the data collection and analysis methods used, and the ethical issues addressed in the study. In the results and discussion chapter, the collected and analysed data will be presented and discussed in accordance with academic literature. Finally, in the conclusion chapter, the findings will be summarised, the study's limitations will be identified, and practical recommendations for industry and future research will be made.

Chapter Two
Literature Review

2.0 Introduction

The increasing integration of Artificial Intelligence (AI) in various sectors has prompted a reevaluation of traditional business strategies, particularly in the hospitality industry (Ruel and Njoku, 2021). This literature review delves into the role of AI in enhancing customer retention—a critical aspect of business success in hospitality. As competition intensifies, the ability to maintain long-term customer relationships becomes pivotal, with customer retention recognised as a more cost-effective strategy than customer acquisition (Voss & Voss, 2008). This chapter will explore how AI facilitates this retention by personalizing customer interactions, optimizing service delivery, and ultimately enhancing customer satisfaction. The review will draw on recent studies to illustrate the transformative impact of AI on customer engagement and retention strategies, highlighting both the economic benefits and the challenges of implementing AI in hospitality settings. Through a comprehensive analysis of current literature, this review aims to provide a thorough understanding of the dynamic interplay between AI technology and customer retention efforts in the hospitality industry.

2.1 Customer Retention

Customer retention, defined as an organization's ability to retain customers over time, is an increasingly important subject in today's competitive and dynamic business landscape (Leung et al., 2021; Singh et al., 2023). Businesses are increasingly realising that, in addition to attracting customers, retaining them is a more sustainable and profitable strategy because the cost of attracting new customers far outweighs the cost of retaining them, and customers become more profitable the more loyal they are to an organization (Darzi & Bhat, 2018; Sujata et al., 2019; Singh et al., 2023). As a result, businesses continue to look for new ways to increase customer retention, and one such method has been shown to be effective: the use of AI (Kumar et al., 2019; Singh et al., 2023).

In the hospitality industry, customer retention is pivotal, serving as a cornerstone for sustainable growth. Retaining customers is notably more cost-effective than acquiring new ones, a fact supported by research from Ghani et al. (2022) and Prachayakupt et al. (2016), which emphasizes

the reliance on customer satisfaction, high-quality service, and memorable guest experiences for successful retention strategies. This approach not only reduces the financial burden associated with attracting new customers but also strengthens the brand's market position by nurturing long-term guest relationships.

Effective retention strategies in the hospitality sector are characterised by the delivery of personalised services and maintaining consistent quality. Shoemaker & Lewis (1999) highlight that personalised services tailored to meet the specific needs and preferences of guests can significantly enhance guest satisfaction, fostering a sense of value and belonging among customers. This personal touch ensures that guests feel recognized and valued, which is crucial in encouraging repeat visits (Shoemaker & Lewis, 1999). Consistency in service quality can also not be overstated (Bozdaglar & Kilili, 2015; Jeong et al., 2021). Guests expect reliable and dependable service with each visit, and any deviation from this expectation can lead to dissatisfaction and erode loyalty (Bozdaglar & Kilili, 2015; Jeong et al., 2021). Thus, ensuring that high standards are consistently met is a critical component of effective retention strategies (Bozdaglar & Kilili, 2015; Jeong et al., 2021).

As the industry evolves, the focus is also shifting from solely acquiring new customers to maintaining and enhancing relationships with existing ones. Nasir (2017) discusses the importance of loyalty marketing in this context, which involves rewarding repeat customers through loyalty programs, special offers, and exclusive services. These programs are designed to acknowledge and reward the loyalty of returning guests, thereby incentivising them to continue choosing the brand over competitors and consequently retaining them (the customers) (Nasir, 2017).

2.2 Role of Artificial Intelligence in Customer Retention

AI's impact on customer retention has also been documented in other industries. In the retail industry, studies have been conducted on the use of AI for personalized recommendations, in which AI algorithms analyse customer data to provide tailored product suggestions. Ahmad et al. (2020) discovered that AI-powered recommendation systems significantly improve customer retention by increasing the relevance and accuracy of product suggestions. Similarly, Hou et al. (2022) found that personalised recommendations based on AI algorithms improved customer

satisfaction and loyalty. These findings highlight the importance of artificial intelligence (AI) in personalizing the customer experience and increasing loyalty. Mogaji et al. (2020) found that AI-driven customer service improves customer retention. According to the study, customers value the quick response times and personalised assistance provided by AI-powered chatbots, which leads to increased customer satisfaction and reliability. These findings demonstrate the potential for AI to improve customer service and foster strong customer relationships. Nazir et al. (2023) discovered that AI-enabled targeted marketing campaigns increased conversion rates and customer retention.

Like the retail industry, AI is increasingly recognised for its ability to enhance customer retention within the hospitality industry. According to studies, in the hospitality industry, AI is used to personalise customer experiences, including product and service recommendations based on data from previous feedback, bookings, demographics, and so on (Moise et al., 2021; Al-Hyari et al., 2023). According to these studies, this helps to satisfy customers, making them more likely to return to the hotel and recommend it to others, resulting in not only customer retention but also customer attraction, increased market share, and profitability (Moise et al., 2021; Al-Hyari et al., 2023). Additionally, Guchait et al. (2020) highlights that AI-driven personalisation can help businesses effectively anticipate and adapt to customer needs and preferences, thereby significantly enhancing the customer experience. Melián-González et al. (2021) and Yun & Park (2022) found that the use of chatbots by tourism businesses improved customer communications, resulting in increased customer satisfaction, engagement, loyalty, and retention. This is because customers were able to get round-the-clock customer service, whether it was answering their questions or even booking requests (Melián-González et al., 2021; Yun & Park, 2022; Bulchand-Gidumal et al., 2023).

Despite the advantages offered by AI, there are critical viewpoints regarding its ability to fully replace human interactions in the hospitality context. Tussyadiah et al. (2019) argue that while AI can efficiently handle data and automate responses, its capacity to genuinely understand and meet customer expectations with the same depth as human empathy is still debatable. This critique points to a potential gap where AI may not entirely fulfil customer satisfaction needs, especially in scenarios requiring emotional intelligence and human warmth, which are often crucial in the hospitality industry.

2.3 Ease of Use and AI Adoption

Although AI has several advantages, as previously mentioned, certain critical factors, such as ease of use associated with AI implementation, may deter customers from adopting AI, preventing businesses from benefiting from advantages such as customer retention, among others. Studies carried out by Heidenreich et al. (2017) and Liang et al. (2020) revealed that customers are more likely to adopt an easy to use and engage AI- related product or service provided by retail businesses as opposed to one which is not easy to use. In another study, the authors discovered that customers who were familiar with financial institutions' Robo-advisors adopted them more than customers who were unfamiliar with Robo-advisors and found them difficult to use (Belanche et al., 2019). The use of Robo-advisors among the previous set of customers resulted in customer satisfaction (Belanche et al., 2019), which can lead to high customer loyalty and retention in the long term. This means that customers who find robo-advisors unfamiliar and difficult to use may have a negative impact on customer retention due to dissatisfaction.

In line with these arguments, Benckendorff et al. (2019) emphasize that the user interface of technological tools must be intuitive and straightforward. If potential users—whether employees or customers—find the technology cumbersome or unintuitive, it could severely limit its adoption, regardless of the underlying benefits it may offer. This suggests that the practical usability of AI technologies is as crucial as their technical capabilities. In a study conducted by Ivanov et al. (2018), the authors assert that perceived simplicity in interacting with AI-driven tools significantly boosts both employees' and customers' willingness to embrace these technologies. This ease of interaction lowers the initial barriers to use, facilitating broader acceptance and integration into daily operations.

Ho et al. (2022) expanding on the Technology Acceptance Model (TAM) by incorporating factors such as self-efficacy and technological knowledge, showed that the perceived ease of use significantly affects users' attitudes towards AI and their intentions to use AI-powered services. This suggests that user-friendly AI systems do not just encourage initial adoption but also support a positive attitude towards their ongoing use. Supporting this perspective, Gefen and Straub (2000) found that systems that are easier to use are more likely to be accepted and integrated into daily operations, indicating ease of use could lead to increased adoption rates of AI within the hospitality sector.

Similarly, Huang et al. (2021) assessed AI adoption in tourism, using a framework that rates AI applications based on various factors including ease of use. They found that higher ratings in ease of use correlate with increased customer engagement and satisfaction, leading to better adoption outcomes. Furthermore, Nuseir et al. (2022) explore how perceived ease of use impacts the adoption of Internet of Things (IoT) technologies, finding that ease of use significantly enhances trust, which in turn influences adoption rates. These studies underline the necessity of designing AI systems that are intuitive and straightforward, to not only facilitate higher adoption rates but also to enhance operational efficiency.

While ease of use of AI is important, care must however be taken to avoid oversimplification. Bügel et al. (2021) argue that while making AI tools user-friendly is essential, there is a risk that oversimplification could lead users to underutilise advanced features, thereby not fully capitalizing on the technology's capabilities. This could mean that while AI tools are widely accepted and used due to their simplicity, they may not be used to their full potential, which could stifle the realisation of all possible benefits.

This analysis underscores the need for a balanced approach in the design and implementation of AI technologies in the hospitality sector. While ease of use is undeniably important for encouraging adoption, it is equally important to ensure that these technologies are robust and comprehensive enough to handle complex tasks and deliver significant improvements in operational effectiveness and customer satisfaction.

2.4 Trust and AI Adoption

Another aspect crucial to the use of AI, is the ability of customers to trust it. Trust in AI significantly affects its adoption within the hospitality industry and other industries. Customers must feel confident in the reliability and security of AI systems to fully engage with them (Prakash et al. 2023). This trust influences how readily customers will adopt AI technologies for service interactions and is a critical component of customer satisfaction and retention. Pillai and Sivathanu (2020) found that perceived trust influences customers' behavioural intentions to use AI-powered chatbots, indicating that trust can drive or hinder the adoption of such technologies (Pillai & Sivathanu, 2020). Another study by Ho et al. (2022) suggests that factors like self-efficacy and

perceived ease of use mediated by trust play a crucial role in the acceptance of AI-powered services (Ho et al., 2022). Mallat (2007) and Jung et al. (2018) discovered in their studies that, despite the benefits provided to customers by Robo-advisors, such as increased efficiency in financial transactions, trust remained a factor that negatively impacted how much or quickly customers embraced AI technology.

In other studies, customers' concerns about privacy significantly reduced their intention to adopt AI provided by retail companies, regardless of the perceived benefits associated with the use of AI (Inman & Nikolova, 2017; Siau & Wang, 2018; Ferrario et al., 2019). Similarly, Cha (2020) found trust to be associated with customers' intention to utilise robot-services provided by restaurants. Similarly, Choung et al. (2022) emphasised that trust in AI, particularly during the COVID-19 pandemic, had reshaped customer behaviour, with trust acting as a critical mediator between perceived benefits and customer interactions with AI. Moreover, Lv et al. (2022) explored the role of empathy in AI service recovery, finding that empathic responses from AI can enhance trust and encourage continued use after service failures.

Despite these insights, the critical challenge remains the establishment of trust, especially in contexts where customers have heightened privacy concerns or when AI interacts in more personal or complex service settings (Choung et al. 2023). The studies by Prakash et al. (2023) and Ghazi et al. (2023) suggest that while trust can be built through enhanced interactions and perceived benefits, it remains fragile and can be easily undermined by any failures in service or breaches in data security. Furthermore, Lv et al. (2022) highlight that while empathic AI can improve trust, the underlying technology must first be robust enough to avoid frequent failures that necessitate such recovery efforts.

2.5 Research Gap

These evidences indicate the association between ease of use and trust and the adoption of AI, as well as adoption of AI among customers and customer retention; however, there is a dearth of empirical studies that have shown a positive relationship between customers' ease of use of AI and trust in AI and customer retention, particularly in the hospitality industry, where the use of AI is still in its infancy (Chan et al., 2018; Stylos et al., 2021; Bulchand-Gidumal et al., 2023).

As the hospitality industry in Ireland expands and competition among businesses grows (PWC, 2020; Deloitte, 2023), there is a need to identify and understand strategies that businesses can use to improve customer experiences, attract, and retain customers, and thus increase their competitive advantage, making this study critical.

2.6 Theoretical Framework

The present study is driven by two main theoretical frameworks: Technology Acceptance Model (TAM) and the Diffusion of Innovation theories.

2.6.1 The Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Fred Davis in 1989 as part of his doctoral dissertation at MIT. It was specifically crafted to model how users come to accept and use a technology (Davis et al., 1989). The model posits that there are two primary factors—perceived usefulness and perceived ease of use—that influence an individual's decision about how and when they will use a technology, whether at work or elsewhere (Davis et al., 1989). These concepts were derived from the broader Theory of Reasoned Action (TRA), a well-established theory in psychology which aims to predict deliberate behaviour (Davis et al., 1989).

TAM's major strength lies in its simplicity and the robustness of its predictive capabilities. It effectively captures the fundamental determinants of technology acceptance that are critical for system design and user acceptance testing (King & He, 2006). The model's focus on psychological factors provides clear guidelines for the design of interventions to enhance technology uptake (King & He, 2006). Researchers have found TAM very effective in predicting user acceptance across a variety of technologies and user populations, as demonstrated in countless studies across different sectors (King & He, 2006).

However, TAM has been criticised for its simplicity and the limited range of variables it incorporates (Legris, Ingham, & Collerette, 2003). Critics argue that TAM does not account for social, cultural, and organizational influences that might impact technology adoption (Legris, Ingham, & Collerette, 2003). Additionally, the model assumes that user acceptance is solely based on rational and cognitive evaluations of technology, disregarding emotional, spontaneous, or irrational factors (Legris, Ingham, & Collerette, 2003).

Despite its limitations, it remains applicable in various context including that of the present study. In this study, TAM will be used to understand if consumers' perceived ease of use of AI influences their adopting AI. Understanding the perceived ease of use of these AI tools can help businesses tailor technology implementations to better meet user needs and expectations, thus enhancing customer retention and operational efficiency.

2.6.2 Diffusion of Innovations Theory

The Diffusion of Innovations Theory was proposed by Everett M. Rogers in 1962 in his seminal book "Diffusion of Innovations." The theory explores how, why, and at what rate new ideas and technology spread across cultures (Rogers, 1962). Rogers' work is grounded in communication theory and social change, and it maps out a process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 1962).

The theory's strengths lie in its broad applicability across various domains and its detailed analysis of the factors influencing adoption rates. These include the perceived attributes of innovations such as relative advantage, compatibility, complexity, trialability, and observability. Its systematic approach helps predict the adoption likelihood and the eventual success of new technologies or ideas within a community or organization (Rogers, 1964).

However, the theory also has limitations. It may oversimplify the diffusion process by focusing predominantly on positive outcomes and not adequately addressing the socio-economic and cultural resistances that might impede adoption (MacVaugh and Schiavone, 2010). Moreover, the theory assumes that all members of a social system will ultimately have an equal probability of adopting the innovation, which overlooks individual differences and external influences that could affect the decision-making process (MacVaugh and Schiavone, 2010).

Applying the Diffusion of Innovations Theory to this study could provide insights into how AI technologies gain traction among consumers. The theory could help identify the characteristics of AI that most significantly impact its acceptance and usage in this sector. For example, studies have shown that AI's relative advantages over traditional practices, its compatibility with existing systems, and its ease of use are crucial factors driving its adoption in hospitality settings (Huang et al., 2021). This framework could guide the strategic implementation of AI to ensure it aligns with the goals of enhancing customer service and operational efficiency, thereby increasing its likelihood of acceptance and diffusion within the industry.

Chapter Three
Methodology

3.0 Introduction

This chapter covers the methodology of the present study including the research philosophy, research design, research approach and sampling technique. The chapter also highlights the sample size, data collection and analysis methods as well as ethical standards upheld during the conduction of the study.

3.1 Research Philosophy

Research philosophy can be defined as a researcher's beliefs, reality, and assumptions that guide the design, collection, and analysis of data for the study under consideration (Chege & Otieno, 2020; Handema et al., 2023). The current study used positivism due to its close association with quantitative research, such as the present study, as well as its emphasis on using scientific methods to test and validate hypotheses and theories so that knowledge or information drawn is valid, objective, and free of bias (Alakwe, 2017; Park et al., 2020). Positivism's emphasis on using quantitative methods and testing hypotheses before drawing conclusions, as used in this study, ensures that findings can be generalised to other populations and subpopulations, especially when a sufficient sample size is used (in this case, other cities in Ireland) (Johnson & Onwuegbuzie, 2004). Moreover, using quantitative and statistical methods for data collection and analysis saves time (Johnson and Onwuegbuzie, 2004). Positivism, however, has been criticised for its overemphasis on objectivity; critics argue that this rigid approach prevents researchers from broadening their horizons and capturing more details about the phenomenon under investigation, which in the case of this study could be various factors specific to different people that contribute to their ease of use and trust in AI (Maksimovic & Evtimov, 2023). Despite this limitation, positivism was found to be a good fit for the study because it aligned with the research design and methods to be used.

3.2 Research Design

A research design is a systemic and logical plan adopted in research to ensure that the questions and objectives of said research are answered efficiently and in a valid manner (Khanday & Khanam, 2019; Ansari et al., 2022). It determines the methods and techniques to be used in research, such as data collection and analysis techniques, data type, and so on, as well as how there are to be used together in a coherent manner, so there all align with one another and the research goal is ultimately achieved (Machado de Lima Machado de Lima, 2011; Ansari et al., 2022). In line with this, Khanday and Khanam (2019) state that the success or failure of a research study is determined by how solid and strategic the research design is.

There are three types of research designs depending on a study's aims and objectives: quantitative, qualitative, and mixed-method research designs; however, the current study used a quantitative research design (Machado de Lima, 2011; Creswell, 2014; Ansari et al., 2022). The quantitative research design was chosen for a variety of reasons, including its emphasis on the use of standard measurement and statistical analysis tools to collect and analyse numerical/quantifiable data, which was critical in this study to allow the researcher to obtain precise and evidence-based findings (Queiros et al., 2017; Taherdoost, 2022; Xiong, 2022). In addition, quantitative research allows for the use of statistical tools to determine whether or not there is an association between dependent and independent variables, which was useful in this study to provide insight into whether or not there is an association between customer ease of use of AI and customer retention, as well as customer trust of AI and customer retention, thereby aiding a proper understanding of the subject (Mehrad & Zangeneg, 2019). Furthermore, given the gap in literature on the investigated topic, objective analysis and interpretation of findings, which reduces subjectivity and bias associated with quantitative design, was deemed critical, particularly to increase the credibility, reliability, and replicability of the study's findings (Queiros et al., 2017; Xiong, 2022). Another strength of the quantitative research design that contributed to its use in this study was its alignment with hypotheses testing, which was done in this study to reconfirm arguments or propose new arguments with respect to customers' ease of use of AI and trust in AI in Dublin's hospitality industry, as well as the impact that customers' ease of use and trust in AI has on their retention in the industry (Queiros et al., 2017). Furthermore, the use of standardised tools/techniques, emphasis on objectivity, and testing of hypotheses facilitates the generalisability of findings, which was important in this study if the findings and conclusions drawn are to be applied to the hospitality

industry in Dublin, Ireland. It is also worth noting that, in addition to the benefits of quantitative research design, which contributed to its selection as appropriate for this study and use, it was used because qualitative research design, which was originally intended for the current study, could not be used due to time constraints and a lack of interviewees to provide in-depth insight into the subject matter.

Despite the strengths of quantitative research design, it has limitations including the difficulty of capturing rich and quality details about the investigated phenomenon, as well as the high financial cost required to collect large enough and generalizable data, both of which may affect the robustness and replicability of the current study's findings (Choy, 2014; Taherdoost, 2022). Given these constraints, the variables in this study (ease of use of AI, trust in AI, and customer retention) were measured using constructs that have been found valid and reliable in the literature, thereby improving the quality of the findings (Aithal & Aithal, 2020; Ranganathan & Caduff, 2023). Furthermore, while a large sample size (see sample size below) was used to ensure generalizability, an online survey (see data collection below) was used to save money and time (Taherdoost, 2022).

3.3 Research Approach

Research approach can be defined as overall techniques or strategies adopted for a study by researchers (Grover, 2015). While there are two types of research approaches (deductive and inductive), the deductive research approach was used in this study, and involves a researcher taking a top-down approach, moving from general to specific (i.e., starting with a theory, generating hypotheses from theory, testing hypotheses using data collection, and accepting or rejecting hypotheses once specific information is obtained (Park et al., 2020; Kim, 2021). In the context of the current study, this entailed developing hypotheses based on existing theories (technology acceptance model and social exchange theory), testing these hypotheses by assessing customer ease of use and trust in AI, and determining whether these two factors influence customer retention, and then accepting or rejecting the hypotheses.

According to studies, this top-down strategy results in objective analysis and interpretation of findings due to the use of quantifiable and statistical data; it allows for the establishment of casual associations between variables; and facilitates generalizability of findings, all of which improve

the credibility, validity, and reliability of findings and conclusions drawn, as well as align with the current study (Woiceshyn et al., 2018; Park et al., 2020; Kim, 2021). Additionally, alongside the use of quantifiable data, which is consistent with the study's research design, the validation of hypotheses using numerical and statistical data is consistent with the study's research philosophy (positivism) (Park et al., 2020). This alignment of the research approach utilised in a study with other components of the study has been suggested in studies (Park et al., 2020; Kim, 2021).

It is important to note, however, that unlike the inductive approach, the deductive approach fails to consider and explore individual experiences and perspectives (Park et al., 2020; Kim, 2021). This tends to limit the quality and depth of study findings (Park et al., 2020). To address this shortcoming in the current study, established and reliable measures with questions that allow and motivate participants to provide key and valuable information about the investigated phenomenon were used (Aithal & Aithal, 2020; Ranganathan & Caduff, 2023).

3.4 Sampling Technique

The current study used purposive and convenient sampling techniques. Purposive sampling, which entails selecting study participants with knowledge or experiences about the topic under investigation, was used in this case to intentionally select individuals with experience in Dublin's hospitality industry, including restaurants, hotels, and travel agencies, in order to provide reliable and valid information that can also be replicated (Etikan et al., 2016; Campbell et al., 2020). Convenience sampling was also used in this study to identify and include available and accessible individuals and save time (Etikan et al., 2016; Campbell et al., 2020).

3.5 Sample Size

The sample size, defined as the total number of participants to be included in a study, is an important aspect of any research because it ensures that the researcher can collect enough data to effectively answer all the study's questions (Andrade, 2020). For the research questions to be properly answered, a sufficient (not too small or too large) sample size must be used (Andrade, 2020). On that note, the current study used 200 as its sample size. This sample size has also been recommended as adequate in previous studies, especially when Pearson Correlation and Regression analysis is to be conducted in the study, as will be done in this study (Sari et al., 2017;

Memon et al., 2020). According to these studies, with a sample size of 150 or more, the accuracy and reliability of correlation coefficients and regression values obtained through statistical analysis are significantly guaranteed, allowing for correct interpretation of the relationship between variables (Sari et al., 2017; Memon et al., 2020).

3.6 Data Collection Method

Survey, particularly online questionnaire which entails asking individuals questions to extract information/data about a specific topic, was used in this study to collect quantitative data (Weigold et al., 2013). Online questionnaire was used in this study due to the time and cost-efficiency that comes with its use, advantages which paper questionnaires do not provide (Evans & Marthur, 2005; Nayak & Narayan, 2019). Online surveys are also flexible in terms of how they can be designed and sent, which was taken advantage of in this study by sending questionnaires to respondents via email and WhatsApp. They are also convenient (particularly in terms of sharing questionnaires with respondents, collecting and collating data), a feature which was important in this study to reduce the risk of errors in data collection and enhance easy data analysis (Evans & Marthur, 2005; Nayak & Narayan, 2019). Furthermore, the convenience of using them allows respondents to respond at times that are most convenient for them, facilitating complete responses (Evans & Marthur, 2005; Nayak & Narayan, 2019). Moreover, because the researcher is typically absent when the participants complete the questionnaires, the likelihood of bias due to the researcher's presence is significantly reduced, ensuring the validity and reliability of the study's findings (Regmi et al., 2016; Ball, 2019).

The online questionnaire for this study was created using Google Forms and distributed to participants via WhatsApp or email. Given the limitation of low response rate associated with the use of online questionnaires, in addition to sending participants reminders to encourage their participation, questionnaires were designed to contain structured questions, including multiple-choice and dichotomous (Yes/No) questions, so as to facilitate participation and quick responses from participants and reduce the likelihood of participants submitting incompletely filled questionnaires (Evans & Marthur, 2005). Furthermore, structured questions ensured that quantifiable data was collected by the researcher and statistically analysed (Evans & Marthur, 2005; Cheung, 2014). Questions and instructions for answering were also explicit and

straightforward to encourage participation and completion; otherwise, participants may become discouraged and leave the survey (Evans & Marthur, 2005).

Questions included in the questionnaire were adopted from existing literature. Consumers' ease of use of AI was adopted from Davis (1989), Alalwan et al. (2019) and Pan (2020), consumers' trust in AI was adopted from Koufaris & Hampton-Sosa (2004), Mittendorf (2017) and Chen et al. (2022) and customers' retention was adopted from Danesh et al. (2012), Al-Tit (2015) and Wachira & Were (2015). Overall, the questionnaire is divided into five sections: 1) respondent demographics; 2) consumers' ease of use of AI; 3) consumers' trust in AI; 4) the impact of consumers' ease of use of AI on customer retention; and 5) the impact of consumers' trust in AI on customer retention. All questionnaire items were assessed using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Table 1: Sources of Adopted Questionnaire

Sections	**References**
Consumers' ease of use of AI	Davis (1989); Alalwan et al. (2019); Pan (2020).
Consumers' trust in AI	Koufaris & Hampton-Sosa (2004); Mittendorf (2017); Chen et al. (2022)
Customer Retention	Danesh et al. (2012); Al-Tit (2015); Wachira & Were (2015).

3.7 Data Analysis

The quantitative data collected from the survey conducted for this study was analysed using descriptive (mean, frequencies, and standard deviation) and inferential (correlation and regression) statistics. While descriptive statistics were used to analyse and present participants' demographic information such as age, gender, and education, inferential statistics (Pearson's correlation coefficient and regression analysis) were used to analyse and determine the relationship between variables such as consumer ease of use of AI, consumer trust in AI, and customer retention. Furthermore, a Cronbach Alpha coefficient test was performed to confirm the reliability of the

data collection instrument (questionnaire), and to ensure the validity of the questionnaire, it was presented to an expert (the supervisor of the current project) for evaluation, as has been recommended in studies (Arafat et al., 2016; Sürücü & Maslakçi, 2020). It is worthy of note, all statistical analysis was carried out using Statistical Software for Social Sciences (SPSS) version 20.

3.8 Validity and Reliability

Ensuring the validity and reliability of research instruments is crucial for obtaining trustworthy and meaningful results. Validity refers to the accuracy of an instrument in measuring what it is intended to measure. There are several types of validity: construct validity verifies that the test measures the concept it is supposed to measure; content validity ensures the test covers all relevant areas related to the concept; face validity assesses whether the test appears effective in terms of the content it covers; and criterion validity involves comparing the test results with other established measures of the same construct (Trochim & Donnelly, 2006).

Reliability, on the other hand, concerns the consistency of the measurement. Methods to test reliability include test-retest reliability, which checks the stability of a test over time; inter-rater reliability, which assesses the consistency of measurements when different people use the same instrument; and internal consistency, often measured by Cronbach's Alpha, which evaluates the coherence of test results among items within the same test (DeVellis, 2016).

To enhance the reliability and validity of this document, several measures will be implemented. Cronbach's Alpha was used (George & Mallery, 2003).

3.9 Ethical Consideration

Several ethical standards were followed during this study, including participants' voluntary participation, informed consent, anonymity, and confidentiality. In this study, participants were given an information sheet outlining the study's goals and objectives, as well as what was expected of them if they chose to participate (see information sheet in Appendix 2). The information sheet also informed participants of their right to ask questions about the study and their participation at any time, their right to withdraw from the study without repercussions, and that their participation was entirely voluntary (Coffelt, 2017; Bassey and Owan, 2019). The information sheet also

informed participants that they would not be required to provide any personal information when filling out the questionnaires, and that their responses would be kept anonymous and confidential and used solely for the purpose of the study (Mirza et al., 2023). To ensure this and protect respondents' confidentiality and anonymity, questions in the questionnaires were not designed to encourage them to disclose any personal information, and all collected data was securely stored using a password only known by the researcher and in a computer only accessible to the researcher, and deleted immediately after the study was completed and graded to prevent third-party and unauthorised access (Coffelt, 2017; Bassey & Owan, 2019; Mirza et al., 2023). To ensure that all study participants provided informed consent, they were given an informed consent form to fill out voluntarily prior to participating in the study; otherwise, they were not allowed to participate (see consent form in Appendix 3) (Mirza et al., 2023).

Chapter Four

Findings and Analysis

4.0 Introduction

This chapter presents the present study's findings which were gotten following descriptive and inferential analysis of collected data. The chapter also shows the testing and acceptance of all hypotheses.

4.1 Test of Reliability: Cronbach Coefficient Alpha Test

Cronbach's Alpha	N of Items
.957	32

Table 2: Reliability of research instrument used

In line with previous studies, the current study used Cronbach coefficient alpha to assess the reliability of the data collection instrument and the questions contained within it (Mansour, 2015; Yusof et al., 2015). According to Table 2, the cronbach's coefficient alpha value of the research instrument was 0.957, which shows that the study's questionnaire and all 32 items/questions contained in it are reliable and appropriate for measuring the ease of use and trust of artificial intelligence on customer retention. Furthermore, according to Taber (2018), a Cronbach coefficient alpha value of 0.8 or higher indicates that the research instrument is reliable.

4.2 Demographic Data of Participants.

The demographic information of the study's participants was analysed using descriptive statistics such as frequency, percentage, mean, and standard deviation (see Table 3 below). According to the table, the majority of the study's participants (41.9%) were between the ages of 25 and 34, followed next by those between the ages of 18 and 24 (32.3%). Participants aged 35-44 accounted for 9.7% of the total number of participants (93), while those aged 45-54 accounted for 7.5% and those aged 55 and up accounted for 8.6%. The table below also shows that the majority of

respondents were males, accounting for 52.7% of the total population, while females accounted for 47.3%. In terms of educational background, the majority of the study's participants were educated, with a high school diploma (6.5%), diploma degree (10.8%), bachelor's degree (38.7%), master's degree (34.4%), and doctorate degree (8.6%). Only one participant reported no educational background. Furthermore, the majority of participants' responses indicate that they are familiar with using AI in the businesses they patronise in Dublin's hospital industry (84.9%). However, 15.1% of participants reported that they had never used AI in any of the businesses they frequented.

		Frequency	Percentage (%)	Mean	Standard Deviation
Age	18-24	30	32.3	2.18	1.215
	25-34	39	41.9		
	35-44	9	9.7		
	45-54	7	7.5		
	55+	8	8.6		
Gender	Female	44	47.3	1.55	0.522
	Male	49	52.7		
Level of Education	No educational background	1	1.1	2.68	1.596
	High school	6	6.5		
	Diploma	10	10.8		
	Bachelor's degree	36	38.7		
	Master's degree	32	34.4		
	Doctorate or higher	8	8.6		
Have you ever used AI in your experience patronising any business in the hospitality industry here in Dublin	Yes	79	84.9	1.85	0.360
	No	14	15.1		

Table 3: Demographic Data of Participants.

4.3 Objective 1: Customer's ease of use of AI

As shown in table 4, descriptive statistics were also used to analyse participants' responses to the ease of use of AI. The highest mean in the table is found in item 1, where respondents stated that AI tools are simple to use (3.00). Items 3 and 4, which show participants' perceptions of whether AI is easy to operate and converse with, have the next highest means of 2.90 and 2.83, respectively. The mean score of 2.76 in item 6 and 2.71 in item 2 indicate that a significant number of participants agreed that they did not have to think too much when using AI tools for various purposes such as booking, ordering, reservations, and so on, and that AI tools were simple to use for these purposes. Similarly, the mean of 2.75 in item 7 indicates that a significant proportion of

participants agreed that AI's recommendations simplified their booking, reservation, and overall experience. Items 5 and 8 have a similar mean score of 2.57, and show that a significant number of respondents believed that AI tools provided them with the right solutions and that businesses' AI-powered websites and/or applications were simple to use. Finally, the mean score of 2.54 in item 9 indicates that participants did not find using AI for various purposes, such as booking, reservations, and ordering, to be complicated.

Questions	Scale Frequency (Percentage)						
	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Mean**	**Standard Deviation**
AI tools are easy to use.	33 (35.5)	4 (4.3)	13 (14.0)	35 (37.6)	8 (8.6)	3.00	1.757
It is easy to do what I want with AI tools in the hospitality businesses I patronise.	25 (26.9)	5 (5.4)	18 (19.4)	39 (41.9)	6 (6.5)	2.71	1.678
AI is easy to operate	32 (34.4)	4 (4.3)	15 (16.1)	37 (39.8)	5 (5.4)	2.90	1.757
It is easy to converse with the AI tools provided by the businesses I patronise.	29 (31.2)	7 (7.5)	16 (17.2)	36 (38.7)	5 (5.4)	2.83	1.711
I am provided with the right solutions by the AI tools provided by the service provider.	23 (24.7)	8 (8.6)	17 (18.3)	41 (44.1)	4 (4.3)	2.57	1.651
I don't have to think too much when I use AI tools provided by the business for booking, ordering, reservations etc.	29 (31.2)	7 (7.5)	13 (14.0)	39 (41.9)	5 (5.4)	2.76	1.741
AI recommendations make my booking, reservation and overall experience simplified.	30 (32.3)	3 (3.2)	14 (15.1)	42 (45.2)	4 (4.3)	2.75	1.773
I find it easy to navigate business websites and/or applications powered by AI.	28(30.1)	4 (4.3)	9 (9.7)	48 (51.6)	4 (4.3)	2.57	1.790
Using AI for various purposes including booking, reservations, ordering etc is not so complicated.	25 (26.9)	5 (5.4)	13 (14.0)	46 (49.5)	4 (4.3)	2.54	1.723

Table 4: Descriptive Statistics of Customer's ease of use of AI

4.4 Objective 2: Customer's trust in AI

Descriptive statistics were also used to assess participants' trust in AI (Table 5). The majority of participants agreed and strongly agreed that people are safe when interacting with AI (27 and 24 respectively, with a mean score of 2.78); that AI-powered websites and applications can keep personal information confidential (30 and 26 respectively, with a mean score of 2.68); and that AI can look after them (25 and 15, with a mean score of 2.65). A significant number of participants also agreed that AI provides more efficient products and services than humans (2.54) and that AI tools are trustworthy (2.56). Similarly, more participants agreed or strongly agreed to trusting AI-powered apps and websites (2.52) and believing that AI will provide the best services (2.52) than those that disagreed or strongly disagreed. Furthermore, respondents said they trust AI to recommend the best products and services for their needs and demands (2.39), and AI is used in the hospitality industry to ensure that customers get the best products (2.33).

Questions	Scale Frequence(Percentage)						
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
I trust the AI-powered apps and websites.	6 (6.5)	11 (11.8)	20 (21.5)	34 (36.6)	22 (23.7)	2.52	1.364
I am certain that Artificial Intelligence is used in the hospitality businesses to make sure that customers get the best products.	6 (6.5)	7 (7.5)	15 (16.1)	44 (47.3)	21 (22.6)	2.33	1.424
I trust that my personal information will be kept confidential when using AI-powered apps and websites.	8 (8.6)	12 (12.9)	17 (18.3)	30 (32.3)	26 (28.0)	2.68	1.400
I trust that AI will take care of me.	9 (9.7)	16 (17.2)	28 (30.1)	25 (26.9)	15 (16.1)	2.65	1.299
I trust that people are safe when interacting with AI.	9 (9.7)	8 (8.6)	25 (26.9)	27 (29)	24 (25.8)	2.78	1.366
I trust that AI will deliver the best services.	6 (6.5)	7 (7.5)	19 (20.4)	37 (39.8)	24 (25.8)	2.52	1.404
I trust that AI will recommend the best products and services for my needs and demands.	5 (5.4)	5 (5.4)	13 (14)	44 (47.3)	26 (28)	2.39	1.445
I trust that AI will offer more efficient products and services than human beings.	8 (8.6)	8 (8.6)	26 (28)	34 (36.6)	17 (18.3)	2.54	1.372
Overall, I believe AI tools are trustworthy.	5 (5.4)	7 (7.5)	20 (21.5)	35 (37.6)	26 (28)	2.56	1.379

Table 5: Descriptive Statistics of Customer's trust in AI

4.5 Objective 3: Customers' ease of use of AI has a significant influence on customer retention.

Customers' ease of use of AI has a significant influence on customer retention.

The current study used Pearson's product-moment correlation coefficient to test and analyse the relationship between the independent variables (customers' ease of use of AI) and dependent variables (customers' retention) (Table 6). As shown in table 6, the correlation coefficient at the 0.01 significance level and 99% confidence interval is 0.000. The correlation coefficient (0.000) is less than the significance level of 0.01, indicating a strong and positive relationship between customers' ease of use of AI and their retention. This finding provides substantial evidence to accept the alternative hypothesis that customers' ease of use of AI has a significant influence on customer retention and reject the null hypothesis that customers' ease of use of AI has no significant influence on customer retention.

		Ease of Use of AI	**Customer Retention**
Ease of Use of AI	Pearson Correlation	1	.647**
	Sig. (2-tailed)		.000
	N	93	93
Customer Retention	Pearson Correlation	.647**	1
	Sig. (2-tailed)	.000	
	N	93	93
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 6: Correlation between Customers' ease of use of AI and Customer retention

Linear regression analysis was also used in addition to the correlation analysis above to analyse and gain insight into the relationship between customers' ease of use of AI and customers retention. In order to use regression analysis, the regression model was first tested to confirm its fitness for the variables (Tables 7 and 8). The model indices following test for fitness were found to be: R – 0.647; R Square – 0.418; F value – 65.483, in line with recommended and acceptable limits and

indicate that the model is fit for analysing the association between the variables (Stanisavljević, 2017). The R value of 0.647 indicates a significant relationship between customer retention and ease of use of AI, implying that the greater the ease of use of AI, the higher the customer retention. The R square value of 0.418 indicates that customers' ease of use of AI is responsible for 41.8% of customer retention. Table 7 shows the F value of 65.483 at the 0.001 significance level, indicating that the model predicts a reasonable amount of variance (65.48%) of the variables.

Furthermore, the regression coefficient table as seen in Table 9 shows the association between consumer ease of use of AI and customer retention (CR). Customers' ease of use of AI, with a beta coefficient/regression coefficient value of 0.647 and a significance or P value of 0.000, suggests that there is a significant relationship between consumers' ease of use of AI and customer retention. The unstandardized and standardised coefficients are positive at 0.523 and 0.065, indicating a positive and significant relationship between consumers' ease of use of AI and customer retention.

Model	**R**	**R Square**	**Adjusted R Square**	**Standard Error of the Estimate**	**Durbin-Watson**
1	.647[a]	.418	.412	.887	1.989
a. Predictors: (Constant), Ease of Use of AI					
b. Dependent Variable: Customer Retention					

Table 7: Summary of Regression Model

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	51.548	1	51.548	65.483	.000[b]
	Residual	71.635	91	0.787		
	Total	123.183	92			

Table 8: Regression model analysis of variance (ANOVA) test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.718	.198		3.621	.000
	Ease of Use of AI	.523	.065	.647	8.092	.000
a. Dependent Variable: CR						

Table 9: Regression Coefficient

4.6 Objective 4: Customers trust in AI has significant influence on Customer retention.

Regression

Customers' trust in AI has a significant influence on customer retention.

Table 10 demonstrates a positive and significant relationship between customer trust in AI and customer retention. This is proven by the 0.000 correlation coefficient at 0.01 significance level and 99% confidence interval. Given this finding, the alternative hypothesis that customers' trust in AI has a significant impact on customer retention is accepted, while the null hypothesis that it has no significant impact on customer retention is rejected.

		Trust in AI	Customer Retention
Trust in AI	Pearson Correlation	1	.674**
	Sig. (2-tailed)		.000
	N	93	93
Customer Retention	Pearson Correlation	.674**	1
	Sig. (2-tailed)	.000	
	N	93	93
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 10: Correlation between Customers' trust in AI and Customer retention.

The model summary table (table 11) shows that the R value is 0.674, and the R square is 0.455. According to the R square value, customer trust in AI accounts for 45.5% of customer retention. The analysis of variance (ANOVA) table (table 12) demonstrates that the regression model is significant, and there is minimal variance between AI trust and customer retention, with a significance value of 0.000. Furthermore, the F value of 75.916 at the 0.001 significance level indicates that the model predicts a reasonable amount of variance (75.916%) among the variables. Likewise, the regression coefficient table (table 13) demonstrates that customer trust in AI is significantly positively related to customer retention.

Model	**R**	**R Square**	**Adjusted R Square**	**Standard Error of the Estimate**	**Durbin-Watson**
1	.674[a]	.455	.449	.859	2.362
a. Predictors: (Constant), Trust in AI					
b. Dependent Variable: Customer Retention					

Table 11: Summary of Regression Model

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	56.025	1	56.025	75.916	.000[b]
	Residual	67.157	91	.738		
	Total	123.183	92			

Table 12: Regression model analysis of variance (ANOVA) test

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	.330	.226		1.458	.148
	Trust in AI	.710	.082	.674	8.713	.000
a. Dependent Variable: CR						

Table 13: Regression Coefficient

Chapter Five
Discussion of Findings

5.0 Introduction

This chapter discusses the findings from the study on the impact of artificial intelligence (AI) on customer retention in Dublin's hospitality industry, providing a detailed analysis of the data collected through surveys. The demographic analysis of respondents is crucial as it helps in understanding the context of the study's results. Predominantly, the respondents were males and young adults aged 25-34, a demographic known for its comfort and familiarity with digital technologies, as highlighted by George and Mallery (2024). The majority were also well-educated, suggesting a high level of technological proficiency and digital literacy. While these attributes are advantageous, they also suggest caution in generalizing the findings across different demographic groups, where behaviours and preferences might vary significantly (Thomas, 2022). The findings of this research will be discussed based on the objectives of this study.

5.1 Objective 1: Consumers ease of use of AI.

A significant number of consumers reported that AI tools in the hospitality industry are user-friendly, particularly highlighting ease of navigation and operation. This general feedback is indicative of successful integration where technology meets user expectations and operational needs efficiently. For instance, Ho et al. (2022) discuss how perceived ease of use significantly enhances the adoption intentions of AI technologies, reinforcing the importance of intuitive design in promoting user engagement. Complementing this, Jabeen et al. (2021) emphasise that operational effectiveness of AI in hospitality hinges not only on technological sophistication but also on its ability to seamlessly blend into the service environment without causing disruption, suggesting that ease of use is a critical determinant of technology acceptance and satisfaction among users.

The descriptive statistics with mean scores ranging from 2.75 to 3.00 reflect a generally positive perception towards the ease of use of AI tools among consumers. These findings are aligned with the assertions by Li et al. (2021), who highlight that favourable user experiences with AI are often linked to the technology’s ability to meet or exceed user expectations in simplicity and efficiency.

However, the presence of variability in responses, as indicated by the standard deviations, points to a spectrum of user experiences. This variability can be interpreted through the lens of Kong et al. (2022), who note that while many users may find AI tools straightforward, discrepancies in technological literacy and personal preferences can lead to diverse user experiences. This suggests a need for continuous improvements in AI design to cater to a broader audience.

Despite some variability, the overall trend supports the conclusion that most users find AI interfaces comfortable to use within the hospitality industry. This is consistent with findings from Ruel and Njoku (2020), who argue that the integration of AI in service roles needs to align with user expectations and operational workflows to enhance user comfort and satisfaction. Moreover, the emphasis on ease of use as a fundamental aspect of technology adoption in the hospitality sector by Imad (2019) further corroborates the idea that a significant proportion of users feeling comfortable with AI interfaces can lead to higher acceptance rates and potentially greater reliance on such technologies for service delivery.

Furthermore, According to TAM, two primary factors influence the acceptance and use of new technology: perceived usefulness and perceived ease of use. In the context described, the positive feedback from consumers about the ease of navigation and operation of AI tools aligns with TAM's emphasis on perceived ease of use, which directly influences user adoption and satisfaction (Davis, Bagozzi, and Warshaw, 1989).

5.2 Objective 2: Consumers' trust in AI.

The findings reveal a range of trust levels among consumers towards AI in the hospitality industry, with mean scores from 2.33 to 2.78 across various trust-related statements. This variation indicates that while there is a foundational level of trust towards AI technologies, perceptions significantly differ among users, possibly due to varying experiences and expectations. A study by Ersoy and Ehtiyar (2023) supports this notion, suggesting that differences in trust levels can stem from diverse interactions with the technology, where personal data handling and service delivery outcomes play crucial roles. Additionally, Pillai and Sivathanu (2020) discuss how these trust variations can affect the overall perception of AI, emphasizing the importance of AI systems proving their reliability and effectiveness in real-world applications to enhance trust among users.

Most respondents express confidence that AI-powered applications and websites can provide superior services and manage personal information with high confidentiality. This general belief aligns with the findings of Gupta et al. (2022), who indicate that positive experiences with AI in managing data securely and delivering efficient services can significantly boost consumer trust. Moreover, Chi, Denton, and Gursoy (2020) reinforce that trust in AI's ability to outperform human efforts in service delivery is crucial for the widespread acceptance and integration of AI technologies in service sectors like hospitality, where service efficiency and data security are paramount.

Despite some underlying reservations, a significant proportion of consumers show a cautiously optimistic attitude towards AI's efficiency, favouring it over traditional human-operated services in certain aspects. This cautious optimism is reflective of a growing acknowledgment of AI's potential to enhance service delivery through automation and personalisation that may surpass human capabilities. This perspective is echoed by Chen et al. (2022), who argue that as AI technologies demonstrate their capacity to handle complex service interactions efficiently, consumer trust tends to increase, provided that these technologies also continuously demonstrate ethical handling of data and transparent decision-making processes. Conversely, Kansakar, Munir, and Shabani (2017) highlight that while optimism exists, the challenge remains for AI to consistently prove its reliability and superiority over human services without compromising the personalized touch that is often associated with the hospitality industry.

Applying the Diffusion of Innovations Theory to the findings regarding consumer trust in AI within the hospitality industry can illuminate how AI technologies are adopted and accepted based on their perceived attributes. According to this theory, key factors that affect the diffusion of innovations include relative advantage, compatibility, complexity, trialability, and observability. These factors can significantly influence consumer trust and the subsequent adoption of AI technologies (Rogers, 1962).

In this context, the variation in trust levels, with mean scores ranging from 2.33 to 2.78, reflects the complexity and compatibility aspects of the Diffusion of Innovations Theory. This variation suggests that while some consumers perceive a relative advantage in using AI for enhanced service delivery and data security, others may find AI complex and worry about its ability to handle

personal data ethically. Such perceptions directly influence the speed and breadth of AI adoption across different consumer segments within the hospitality industry (Huang et al., 2021).

5.3 Objective 3: Consumers' ease of use of AI and customer retention.

The findings from the regression analysis reveal a strong positive correlation between the ease of use of AI and customer retention, as indicated by an R^2 of 0.418. This suggests that roughly 41.8% of the variance in customer retention can be attributed to how user-friendly customers find AI tools. However, while these statistics highlight the importance of ease of use, they also expose the substantial portion of customer retention that remains unexplained by this factor alone. This gap suggests that other elements, possibly including service quality, personal interaction, and customer perceptions of value, might also play significant roles in influencing customer loyalty. Studies like those by Gupta et al. (2022) support the positive impact of intuitive AI interactions on loyalty but also caution that over-reliance on technological solutions without sufficient human engagement can detract from the personalized service that often characterizes hospitality.

The positive coefficients in the regression model underscore the critical role that user-friendly AI applications play in retaining customers in the hospitality sector. Nonetheless, this positive portrayal should be critically examined against the backdrop of potential over-dependence on technological interactions that may lead to a depersonalized customer experience. Ersoy and Ehtiyar (2023) discuss how seamless AI interactions improve customer experiences, but they also raise concerns about the potential for AI to displace the human elements that are crucial to hospitality. Furthermore, Chi, Denton, and Gursoy (2020) highlight the need for a balanced approach where technology enhances service delivery without replacing the personal touches that often form the basis of customer loyalty in the hospitality industry. These considerations suggest that while AI's ease of use is undoubtedly beneficial for customer retention, it must be integrated thoughtfully within a broader strategy that values and preserves the human aspects of customer service.

From the perspective of the Diffusion of Innovations Theory, the strong positive correlation between ease of use and customer retention indicated by the R^2 of 0.418 implies that ease of use is a critical attribute that significantly accelerates the diffusion and adoption of AI in the hospitality

industry. This attribute directly impacts the rate of adoption among consumers, as it enhances the technology's accessibility and reduces barriers to use, making it more attractive to both first-time and repeat users (Huang et al., 2021). However, the theory also provides insight into why a significant portion of the variance in customer retention remains unexplained by ease of use alone. It suggests that other attributes of the innovation, such as its ability to deliver personalized service (an aspect of relative advantage) and how well it integrates into the existing social and service systems (compatibility), are also important. The theory would argue that for AI to be fully embraced and to achieve higher levels of customer retention, it must not only be easy to use but also demonstrate clear advantages in improving service quality and maintaining the personal touch that is valued in hospitality (Rogers, 1962).

Thus, the Diffusion of Innovations Theory encourages a holistic view of technology adoption, emphasizing that while ease of use is crucial, the successful diffusion of AI in hospitality also depends on addressing and integrating other influential factors such as service quality, personal interaction, and customer perceptions of value. This balanced approach ensures that while AI enhances operational efficiencies, it does not overshadow the human elements essential to customer satisfaction and loyalty in the hospitality industry (Huang et al., 2021).

5.4 Objective 4: Consumers' trust in AI and customer retention.

The regression analysis provides compelling evidence of a strong relationship between customers' trust in AI and customer retention, as demonstrated by an R^2 of 0.455. This suggests that nearly 45.5% of the variance in customer retention can be explained by the level of trust customers have in AI technologies. While this statistic underscores the critical importance of trust, it also implies that over half of the factors influencing customer retention remain unaccounted for by trust alone. This observation invites a deeper examination of other potential factors such as service quality, personal interaction, and overall customer satisfaction that might also significantly impact retention rates. Supporting this broader perspective, Gupta et al. (2022) emphasize that trust in AI must be complemented by consistent service delivery and ethical data management to fully realize customer retention benefits. Similarly, Ersoy and Ehtiyar (2023) caution against solely relying on technological trust without addressing the underlying service dynamics that also influence customer loyalty.

The significant positive correlation found in the study highlights trust as a pivotal factor influencing customer loyalty and retention strategies in businesses employing AI technologies. This finding aligns with the work of Pillai and Sivathanu (2020), who argue that trust in AI not only enhances user comfort but also encourages repeat interactions and positive word-of-mouth, essential for sustained business success. However, Chi, Denton, and Gursoy (2020) argue for a nuanced approach, noting that while trust in AI can substantially benefit customer retention, it may also lead to over-dependence on technology, potentially neglecting the importance of human touch in the hospitality sector. This critical viewpoint suggests that while AI can enhance efficiency and personalisation, it should not replace the human elements that often define the hospitality experience and are crucial for building deep, lasting customer relationships.

These considerations point to the necessity for a balanced strategy where trust in AI is integrated with strong customer service practices, ensuring that technology enhances rather than replaces the human aspects of service delivery.

Applying the Technology Acceptance Model (TAM) to the findings of the regression analysis on customer trust in AI and customer retention can provide deeper insights into how user perceptions shape technology adoption and its subsequent impact on business metrics such as customer loyalty and retention. According to TAM, two primary factors, perceived usefulness (how beneficial a user believes the technology to be) and perceived ease of use (how easy a user believes it is to use the technology), determine the acceptance and usage of a technology. In this case, trust in AI can be closely associated with perceived usefulness (Legris, Ingham, & Collerette, 2003).

The analysis indicating that 45.5% of the variance in customer retention can be explained by trust in AI highlights the significant role of perceived usefulness in the acceptance of AI technologies within the hospitality industry. Trust enhances perceived usefulness as customers believe that trustworthy AI technologies will meet their expectations in terms of reliability, performance, and data handling. This perceived usefulness, as suggested by the TAM, strongly influences the decision to continue using AI services, thereby directly affecting customer retention (Davis, Bagozzi, and Warshaw, 1989).

However, the finding that over half of the factors influencing customer retention remain unaccounted for by trust alone aligns with the broader perspective of TAM, which suggests that other elements, such as perceived ease of use and external variables (e.g., user experience, service

quality, personal interaction), also play critical roles. These elements might include how intuitive and user-friendly the AI technology is, how it integrates into the overall service delivery, and how it complements human service elements, which are not captured solely by trust but are essential for comprehensive technology acceptance and sustained customer loyalty (Davis, Bagozzi, and Warshaw, 1989).

5.5 Critical Analysis

Based on the findings above, it's important to critically evaluate all the findings. This will help ensure an objectivity of findings and some guidance in the application of this study's findings. Firstly, it's worthy to note that this study's demographic analysis reveals a predominant representation of young, educated males, comfortable with digital technologies, as noted by George and Mallery (2024). This demographics' familiarity with technology could predispose them to more favourable perceptions of AI, possibly skewing the study results towards more positive outcomes. Thomas (2022) cautions against generalizing such findings, as different demographic groups may exhibit varied behaviours and preferences toward AI, potentially influencing the reliability of these findings when applied to a broader population.

Consumers reported high usability of AI in hospitality, noting particularly the ease of navigation and operation. This feedback supports the notion that successful technological integration meets user expectations and operational needs effectively. Ho et al. (2022) underlined the significant role of perceived ease of use in enhancing adoption intentions, emphasizing the importance of intuitive design in user engagement. However, Jabeen et al. (2021) remind us that while ease of use is crucial, the seamless integration of AI into existing service environments without disruption is equally important. This suggests that technological sophistication alone is not enough; AI must also enhance the service process to be truly effective.

Furthermore, the variability in user responses, as highlighted by Li et al. (2021), points to the need for ongoing improvements in AI design to cater to a broader audience. Despite generally positive scores, the presence of variability underscores that not all users share the same level of comfort or satisfaction, suggesting a gap that could affect broader acceptance and usability.

In other findings, this study revealed varied trust levels in AI, with some users exhibiting foundational trust and others showing hesitancy, potentially influenced by differing experiences and expectations. Ersoy and Ehtiyar (2023) suggest that such variations in trust could stem from how AI handles personal data and delivers services. Trust is further complicated by the findings that while most respondents believe AI can deliver superior services and manage data securely, a critical perspective by Pillai and Sivathanu (2020) argues that proving AI's reliability in real-world settings is essential for sustaining trust.

In the same vein, the cautiously optimistic view towards AI's efficiency over human-operated services, as discussed by Chen et al. (2022), reflects a recognition of AI's potential benefits. However, Kansakar, Munir, and Shabani (2017) caution that AI must consistently demonstrate its superiority without sacrificing the personal touch crucial in hospitality, highlighting a potential area of conflict between technological efficiency and service personalisation.

Moving on, other findings indicated a strong positive correlation between AI's ease of use and customer retention, emphasizing the importance of user-friendly AI applications in retaining customers. However, the analysis suggests that other factors, such as service quality and personal interaction, also play significant roles in customer loyalty, a point supported by Gupta et al. (2022). This underscores the need for a balanced approach where AI enhances rather than replaces human interactions, ensuring that the personalisation characteristic of the hospitality industry is not lost.

This means that the strong relationship between trust in AI and customer retention, highlights trust as a critical factor in customer loyalty strategies. However, this finding also exposes the substantial portion of customer retention influenced by factors other than trust, suggesting the complexity of customer loyalty dynamics. Gupta et al. (2022) stressed the need for AI to be complemented by consistent service delivery to maximize customer retention benefits effectively. A view that would be instructive to keep in mind.

In all, while the study presents significant insights into the role of AI in enhancing customer retention through ease of use and trust, it also highlights the need for a comprehensive approach that considers both technological and human factors in the hospitality industry. These findings suggest integrating AI in ways that enhance service delivery while maintaining the essential human elements that define the hospitality experience.

Chapter Six

Conclusion, Limitations and Recommendations

6.0 Introduction

This chapter will cover the summary of the study's findings, as well as highlight the limitations of the study. The chapter will also contain recommendations based on the findings of the study.

6.1 Conclusion

This study aimed to investigate how ease of use and trust in AI impact customer retention within the hospitality sector of Dublin. The research objectives were delineated into three main areas: assessing the impact of AI's ease of use on customer retention, evaluating how trust in AI affects customer retention, and exploring the relationship between customer satisfaction and retention influenced by AI's ease of use and trust. The demographic characteristics of the respondents provided valuable context for interpreting the study's findings. The majority of respondents were young adult males, reflecting broader trends in technology adoption. Additionally, the sample was predominantly well-educated, indicative of a population likely to possess higher levels of technological proficiency. However, it's essential to acknowledge potential limitations in generalising findings based on this specific demographic composition.

Reliability analysis using Cronbach's Alpha test, demonstrated high internal consistency and reliability of the survey items used in the study. This instilled confidence in the validity of the survey instrument, enhancing the credibility of the study's findings.

Examining respondents' perceptions of ease of use and trust in AI highlighted the importance of user-friendly interfaces and transparent algorithms in fostering trust and acceptance of AI technologies. Correlation analysis revealed significant positive correlations between trust in AI, ease of use of AI, and customer retention. These findings align with theoretical frameworks such as the Technology Acceptance Model (TAM), emphasizing the interconnectedness of trust, usability, and customer retention. Regression analysis confirmed the significant influence of both ease of use and trust in AI on customer retention, providing empirical support for the theoretical proposition that customer perceptions of AI usability and trust are important drivers of retention in the hospitality industry.

Aligning the findings with the research objectives, it was evident that both ease of use and trust in AI play critical roles in influencing customer retention. Simplified interactions, straightforward navigation, and trustworthiness of AI technologies were associated with higher rates of customer loyalty. Additionally, satisfied customers who perceived AI technologies as easy to use and trustworthy were more likely to remain loyal to hospitality services that employ AI.

In conclusion, this study's findings offer valuable insights into the complex dynamics of AI's impact on customer retention in Dublin's hospitality industry. By understanding the interplay between ease of use, trust, satisfaction, and retention, businesses can develop targeted strategies to enhance customer engagement, satisfaction, and loyalty in an increasingly AI-driven landscape.

6.2 Limitations

Firstly, the demographic scope of the study primarily involved young, well-educated males, potentially limiting the generalizability of the findings across other demographic groups. Such a narrow demographic focus may not accurately represent the broader population's interaction with AI in hospitality settings, leading to skewed insights that might not be applicable universally (Thomas, 2022).

Secondly, the reliance on quantitative data might not fully capture the depth of individual perceptions and experiences regarding AI technologies. This methodological approach restricts the exploration of nuanced user sentiments and the contextual reasons that might influence their trust or ease of use ratings, thereby potentially oversimplifying complex attitudes towards AI (Johnson & Onwuegbuzie, 2004).

Thirdly, the study's geographical confinement to Dublin's hospitality industry could limit the findings' applicability to other regions or sectors. The unique cultural and economic context of Dublin may influence AI adoption and customer attitudes differently compared to other geographical areas, affecting the study's external validity.

Lastly, the research predominantly focuses on the perceived ease of use and trust in AI, potentially overlooking other significant factors such as pricing, service quality, or personal interactions. These factors are also crucial in influencing customer loyalty and retention but were not thoroughly explored in this study (Gupta et al., 2022).

6.3 Recommendations

Based on the above exploration of AI's impact on customer retention in Dublin's hospitality industry, here are five recommendations to further enrich and advance research in this domain, supported by recent relevant authorities:

1. Emphasise Human-Centred Design: The pivotal role of ease of use in influencing customer retention underscores the importance of prioritizing human-centred design principles in AI-driven services. Research by De Peuter et al., (2023) highlights the significance of designing interfaces that align with users' mental models and cognitive capacities. By focusing on intuitive and user-friendly design, hospitality businesses can enhance customer satisfaction and loyalty, fostering enduring relationships with their clientele.

2. Foster Trust through Ethical AI Practices: Building trust in AI systems requires a commitment to ethical and transparent practices. Recent studies by Jobin et al. (2019) emphasise the importance of ethical AI frameworks in mitigating risks and fostering trust among users. Hospitality businesses should prioritise transparency, accountability, and fairness in their AI applications, thereby instilling confidence and trust in their customer base.

3. Harness the Power of Personalisation: Leveraging AI to deliver personalised experiences can significantly impact customer retention rates. Research by Rodrigues do Nascimento Junior, (2024) underscores the effectiveness of AI-driven personalisation in enhancing customer engagement and loyalty. By leveraging data analytics and machine learning algorithms, hospitality businesses can tailor their services to meet the unique preferences and needs of individual customers, thereby deepening customer relationships and fostering long-term loyalty.

4. Educate Customers about AI Benefits: Proactive customer education initiatives can help dispel misconceptions and foster acceptance of AI technologies. Studies by Prentice et al., (2020) emphasise the importance of educating users about the benefits and capabilities of AI systems. Hospitality businesses should invest in clear and accessible communication channels to educate their customers about the value proposition of AI-driven services, addressing concerns and building confidence in the technology.

5. Adopt a Culture of Continuous Learning and Adaptation: Given the dynamic nature of AI technologies and customer preferences, businesses must embrace a culture of continuous learning and adaptation. Research by Khammadee (2023) highlights the importance of agility and responsiveness in navigating technological advancements and changing market dynamics. By staying attuned to emerging trends, soliciting customer feedback, and iteratively refining their AI strategies, hospitality businesses can remain competitive and effectively meet the evolving needs of their customer base.

6.4 Recommendations Based on Research Limitations

To address the limitations in this study, it is recommended that future research targets a more diverse demographic profile. Employing stratified sampling techniques could ensure that all relevant demographic groups are adequately represented, providing a more comprehensive understanding of AI's impact across different customer segments (Thomas, 2022).

Incorporating qualitative research methods such as interviews or focus groups would enrich the data collection process. This mixed-method approach would allow for deeper insights into the emotional and psychological factors influencing customer attitudes towards AI, offering a fuller picture of their experiences (Johnson & Onwuegbuzie, 2004).

Expanding the research to include multiple geographical locations and different hospitality settings would enhance the generalizability of the findings. Conducting comparative studies across various cultural and economic backgrounds would help validate the findings and tailor AI integration strategies to specific regional needs (Gupta et al., 2022).

Finally, future studies should consider a broader range of variables affecting customer retention. Including factors such as cost-effectiveness, personalization capabilities, and actual service outcomes could provide a more detailed and nuanced analysis of the factors that influence customer loyalty in the presence of AI technologies (Gupta et al., 2022).

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APPENDICES

Appendix 1: Ethics Form

National College of Ireland

Human Participants Ethical Review Application Form

All parts of the below form must be completed. However, in certain cases where sections are not relevant to the proposed study, clearly mark NA in the box provided.

Part A: Title of Project and Contact Information

Name
Negedu Pius Yusuf

Student Number (if applicable)
21211108

Email
Yusufpius19@gmail.com

Status:
Undergraduate ☐
Postgraduate ■
Staff ☐

Title of Research Project
Customer Retention Strategies in the Retail Industry: Exploring the Integration and Impact of Artificial Intelligence

Have you read the NCI Ethical Guidelines for Research with Human Participants?
Yes ■
No ☐

Please indicate any other ethical guidelines or codes of conduct you have consulted
N/A

Has this research been submitted to any other research ethics committee?

Yes ☐
No ■

If yes please provide details, and the outcomes of this process, if applicable:

N/A

Is this research supported by any form of research funding?

Yes ☐
No ■

Briefly outline the following information (not more than 200 words in any section).

Proposed starting date and duration of project

The research aims and objectives
This research seeks to investigate the effect of artificial intelligence (AI) implementation on customer retention within retail industries and identify factors contributing to its successful implementation.

The rationale for the project
Overall, this project's rationale lies in customer retention's importance; AI's potential; knowledge gaps prevalent within retailing environments and practical implications for retailers operating within that environment.

The research design
For this project, qualitative analysis is the research design chosen as its methodology.

The methods of data collection
Data collection methods used for this research project involve conducting semi-structured interviews with participants who possess relevant experience in AI implementation and customer retention in retail industries.

The research sample and sample size
The sample for this study will involve customers and retail industry professionals with experience and knowledge regarding AI implementation in customer retention strategies. A small sample size would be used.

The nature of any proposed pilot study
Yet to be decided.

The methods of data analysis
The method of data analysis is thematic analysis.

If yes please provide details, and indicate whether any restrictions exist on the freedom of the researcher to publish the results:

N/A

Part B: Research Proposal

Part C: Ethical Risk

Please identify any ethical issues which will arise and how you will address them.
The researcher will obtain informed consent from participants, maintain anonymity and confidentiality of data collection methods, abide by ethical regulations, and conduct the study with integrity and transparency. This will address ethical concerns like the right to dignity and privacy.

Please indicate any risk of harm or distress to participants.
N/A

Please indicate how you will address this risk (e.g. debriefing procedures, etc.).
N/A

Do the participants belong to any of the following vulnerable groups?
(Please tick all those involved).

☐ Children;
☐ The very elderly;
☐ People with an intellectual or learning disability
☐ Individuals or groups receiving help through the voluntary sector
☐ Those in a subordinate position to the researchers such as employees
☐ Other groups who might not understand the research and consent process

N/A

Please include copies of any information letters and consent forms with the application.

Part D: Confidentiality and Data Protection

Please indicate the form in which the data will be collected.
☐ Identified ☐ Potentially Identifiable ■ De-Identified

What arrangements are in place to ensure that the identity of participants is protected?
Strict confidentiality measures are implemented to protect participant identities. Data on participants will be anonymized, stored safely and with limited access.

Please indicate any recording devices being used to collect data (e.g. audio/video).
N/A

Please describe the procedures for securing specific permission for the use of these recording devices in advance.
N/A

- ▫ Individuals or groups receiving help through the voluntary sector
- ▫ Those in a subordinate position to the researchers such as employees
- ▫ Other groups who might not understand the research and consent process
- ▫ Other vulnerable groups

How will the research participants in this study be selected, approached and recruited?

Retail professionals will be approached through networks and invitations; while customers will be randomly sampled in convenience sampling. Clear communication, informed consent and data confidentiality will all be ensured throughout.

What inclusion or exclusion criteria will be used?

The study aims to engage customers mainly young adults and retail industry professionals with experience and knowledge regarding Artificial Intelligence implementation in customer retention strategies.

How will participants be informed of the nature of the study and participation?

All participants will be informed about the nature study by way of clear and precise explanations contained in a participant information sheet or consent form.

What procedures will be used to document the participants' consent to participate?

A participant information sheet or consent form.

If vulnerable groups are participating, what special arrangements will be made to deal with issues of informed consent/assent?

Please describe the procedures for securing specific permission for the use of these recording devices in advance.

N/A

Please indicate the form in which the data will be stored.

▫ Identified ▫ Potentially Identifiable ■ De-Identified

Who will have responsibility for the data generated by the research?

The researcher.

Please describe the procedures of the storage and destruction of data.

Data will be secured using password-protected systems and, once the study is concluded, will be appropriately disposed of according to data protection regulations and ethical considerations.

Dissemination and Reporting

Please describe how the participants will be informed of dissemination and reporting (e.g. submission for examination, reporting, publications, presentations)?

The participants will be made aware that research findings could be published in academic publication. Only aggregated data, not individual information will be reported.

If any dissemination entails the use of audio, video and/or photographic records (including direct quotes), please describe how participants will be informed of this in advance.

N/A

Part E: Signed Declaration

I confirm that I have read the NCI Ethical Guidelines for Research with Human Participants, and agree to abide by them in conducting this research. I also confirm that the information provided on this form is correct.

Signature of Applicant_____NEGEDU_____

Date ____30TH MAY 2023_____

Signature of Supervisor (where appropriate)_____

Date _____

Appendix 2: Participants' Information Sheet

Influence of Ease of Use and Trust of Artificial Intelligence on Customer Retention: A Study of Dublin's Hospitality Industry.

Participant Information Sheet

Dear Participant,

I would like to invite you to take part in a research study. Before you decide, you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether or not to take part.

Who I am and What this study is about

I am Negedu Pius Yusuf, a master's student at the department
of Entrepreneurship, National College of Ireland, Dublin, Ireland. I am conducting a research project for my dissertation titled "examining the influence of ease of use and trust of artificial intelligence on customer retention: a study of Dublin's hospitality industry", and I would like to invite you to participate in the study.

What will taking part involve?

Taking part will require you to answer some questions about your ease of use and trust in AI, as well as how this affects your loyalty to hospital businesses. The survey will take place online, and the questions are designed to take no more than 15 minutes of your time.

Why have you been invited to take part?

I am inviting you to take part in this research because I believe your contribution will be instrumental to the outcome of this project.

Do you have to take part?

No, please note that your participation is completely voluntary and you have the right to refuse
participation, refuse any question and withdraw at any time without any consequence whatsoever.

What are the possible risks and benefits of taking part?

There are no risks associated with participating in this study. In terms of benefits, you will help contribute to knowledge on the investigated topic.

Will taking part be confidential?

Your participation in this study will be completely confidential. The questionnaire will be completed anonymously without questions that require or motivate you to give any personal or identifiable information about yourself. The data will also be securely stored to avoid third parties gaining access to it.

Please note that you are free to ask further questions to seek clarification about the study and your participation in the study by emailing me (
Negedu Pius Yusuf) at X21211108@student.ncirl.ie

Appendix 3: Consent Form

Informed Consent *

By continuing with this questionnaire, you acknowledge that: (1) you have read and understood all of the details of this study contained in the Information Sheet above (2) your questions about the study have been answered to your satisfaction and you understand that you may ask further questions at any point.

- ◯ Yes (Please continue with the questionnaire)
- ◯ No (Please do not continue with the questionnaire).

Appendix 4: Questionnaire

Questionnaire

Influence of Ease of Use and Trust of Artificial Intelligence on Customer Retention: A Study of Dublin's Hospitality Industry.

Section A: Socio-Demographic Information of Participants

Please tick [ ] the option that describes you.

1. Gender	**2. Age**	**3. Educational Level**
Male [ ]	18-24 [ ]	No educational background [ ]
Female [ ]	25-34 [ ]	Primary School [ ]
Others [ ]	35-44 [ ]	Secondary School [ ]
	45-54 [ ]	Diploma [ ]
	55+ [ ]	Bachelor's Degree [ ]
		Master's Degree [ ]
		Doctorate or higher [ ]

Have you ever used AI in your experience patronising any business in the hospitality industry here in Dublin?

Please Note: AI include technologies and techniques that enable computers to perform tasks that typically require human intelligence. These technologies include digital assitants like Siri, Alexa; translation tools like google translate; robots, recommendation engines etc.

Yes [ ] No [ ]

Section B: Consumers' Ease of Use of AI

Given your experience using artificial intelligence (AI) tools (service robots, chatbots, recommendation systems, virtual assistants, etc.) in Dublin's hospitality industry (hotels, restaurants, travel agencies), please indicate your level of agreement with the following statements:

1. AI tools are easy to use.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

2. It is easy to do what I want with AI tools in the hospitality businesses I patronise.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

3. AI is easy to operate.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

4. It is easy to converse with the AI tools provided by the businesses I patronise.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

5. I am provided with the right solutions by the AI tools provided by the service provider.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

6. I don't have to think too much when I use AI tools provided by the business for booking, ordering, reservations etc.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

7. AI recommendations make my booking, reservation and overall experience simplified.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

8. I find it easy to navigate business websites and/or applications powered by AI.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

9. Using AI for various purposes including booking, reservations, ordering etc is not so complicated.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

Section B: Consumers' trust in AI

Given your use of artificial intelligence (AI) (service robots, chatbots, recommendation systems, virtual assistants, etc.) in Dublin's hospitality industry (hotels, restaurants, travel agencies), please indicate your level of agreement with the following statements:

1. I trust the AI-powered apps and websites.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

2. I am certain that Artificial Intelligence is used in the hospitality businesses to make sure that customers get the best products.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

3. I trust that my personal information will be kept confidential when using AI-powered apps and websites.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

4. I trust that AI will take care of me.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

5. I trust that people are safe when interacting with AI.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

6. I trust that AI will deliver the best services.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

7. I trust that AI will recommend the best products and services for my needs and demands.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

8. I trust that AI will offer more efficient products and services than human beings.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

9. Overall, I believe AI tools are trustworthy.

Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

Section C: Customer Retention

With respect to your ease of use and trust in AI provided by the businesses you patronise, please indicate your level of agreement with the following statements:

1. There is a high chance of me continuing my relationship with the businesses I patronise (hotels, restuarants etc) within the next three month?
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

2. There is a high chance of me continuing my relationship with the businesses I patronise (hotels, restuarants etc) within the next six months?
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

3. There is a high chance of me continuing my relationship with the businesses I patronise (hotels, restuarants etc) within the next one year?
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

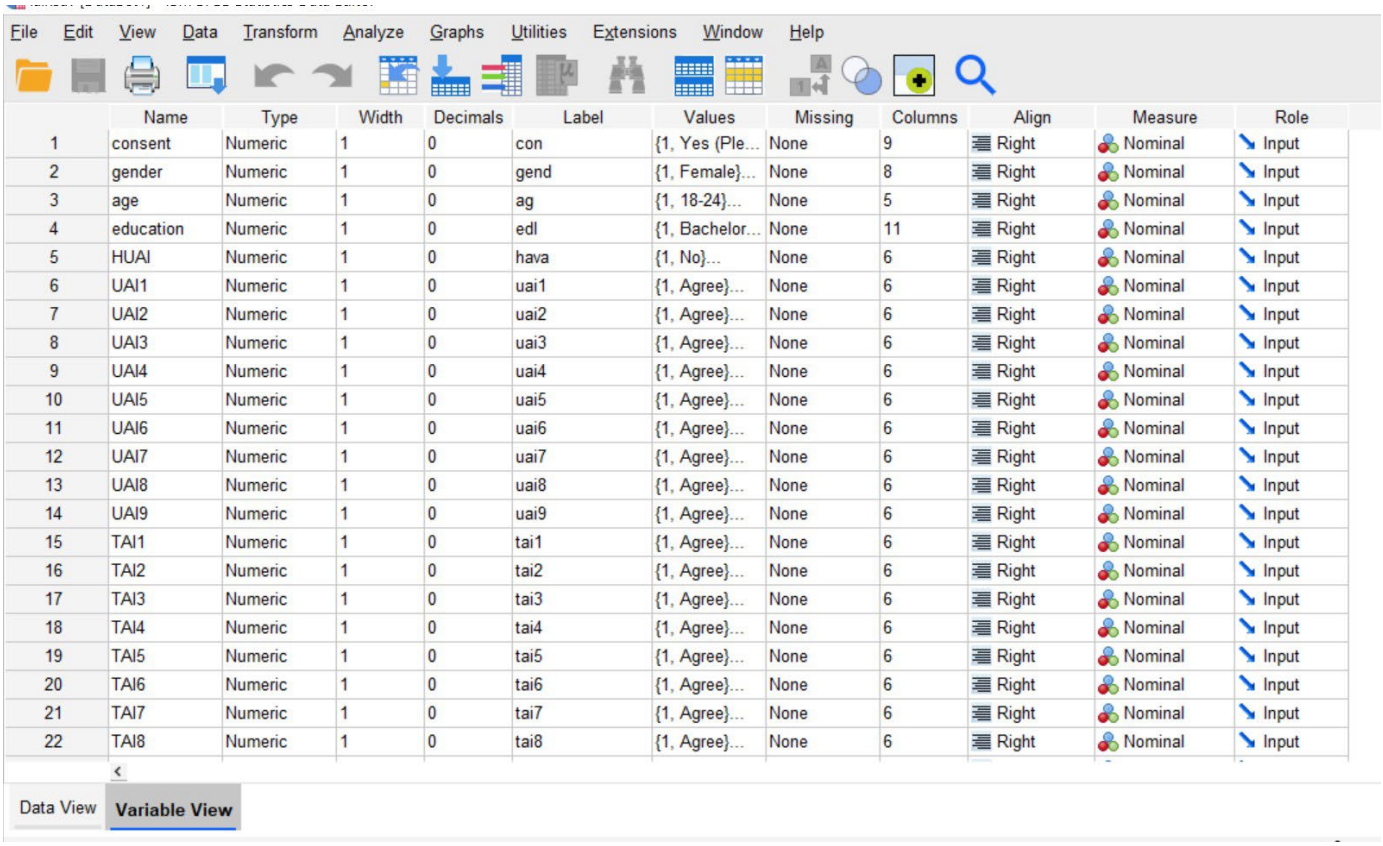
4. I plan to continue my relationship with the businesses I patronise (restaurants, hotels etc.) in future (years from now).
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

5. I would encourage friends and relatives to patronise the business.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

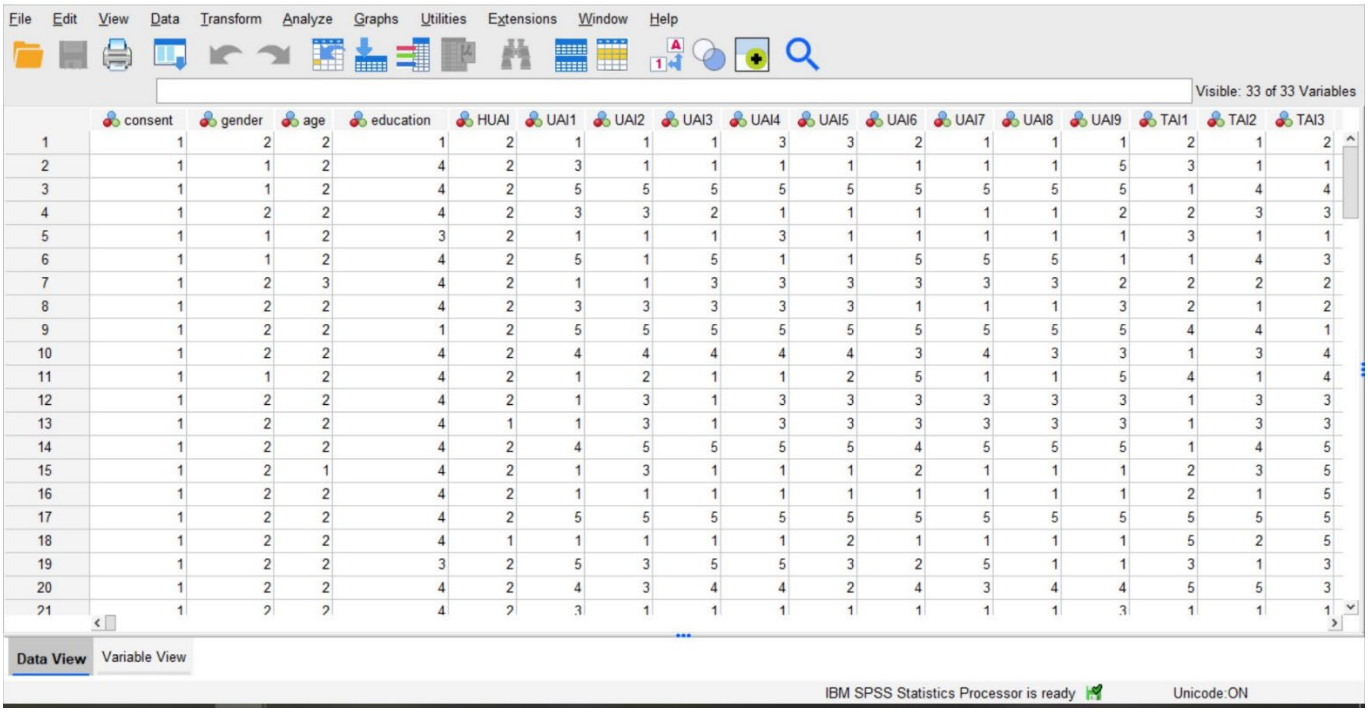
6. I have said positive things about the business to others.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

7. I consider the business as my first choice.
Strongly Disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly Agree [ ]

Appendix 5: SPSS Sheet



	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	consent	Numeric	1	0	con	{1, Yes (Ple...	None	9	Right	Nominal	Input
2	gender	Numeric	1	0	gend	{1, Female}...	None	8	Right	Nominal	Input
3	age	Numeric	1	0	ag	{1, 18-24}...	None	5	Right	Nominal	Input
4	education	Numeric	1	0	edl	{1, Bachelor...	None	11	Right	Nominal	Input
5	HUAI	Numeric	1	0	hava	{1, No}...	None	6	Right	Nominal	Input
6	UAI1	Numeric	1	0	uai1	{1, Agree}...	None	6	Right	Nominal	Input
7	UAI2	Numeric	1	0	uai2	{1, Agree}...	None	6	Right	Nominal	Input
8	UAI3	Numeric	1	0	uai3	{1, Agree}...	None	6	Right	Nominal	Input
9	UAI4	Numeric	1	0	uai4	{1, Agree}...	None	6	Right	Nominal	Input
10	UAI5	Numeric	1	0	uai5	{1, Agree}...	None	6	Right	Nominal	Input
11	UAI6	Numeric	1	0	uai6	{1, Agree}...	None	6	Right	Nominal	Input
12	UAI7	Numeric	1	0	uai7	{1, Agree}...	None	6	Right	Nominal	Input
13	UAI8	Numeric	1	0	uai8	{1, Agree}...	None	6	Right	Nominal	Input
14	UAI9	Numeric	1	0	uai9	{1, Agree}...	None	6	Right	Nominal	Input
15	TAI1	Numeric	1	0	tai1	{1, Agree}...	None	6	Right	Nominal	Input
16	TAI2	Numeric	1	0	tai2	{1, Agree}...	None	6	Right	Nominal	Input
17	TAI3	Numeric	1	0	tai3	{1, Agree}...	None	6	Right	Nominal	Input
18	TAI4	Numeric	1	0	tai4	{1, Agree}...	None	6	Right	Nominal	Input
19	TAI5	Numeric	1	0	tai5	{1, Agree}...	None	6	Right	Nominal	Input
20	TAI6	Numeric	1	0	tai6	{1, Agree}...	None	6	Right	Nominal	Input
21	TAI7	Numeric	1	0	tai7	{1, Agree}...	None	6	Right	Nominal	Input
22	TAI8	Numeric	1	0	tai8	{1, Agree}...	None	6	Right	Nominal	Input



Visible: 33 of 33 Variables

	consent	gender	age	education	HUAI	UAI1	UAI2	UAI3	UAI4	UAI5	UAI6	UAI7	UAI8	UAI9	TAI1	TAI2	TAI3
1	1	2	2	1	2	1	1	1	3	3	2	1	1	1	2	1	2
2	1	1	2	4	2	3	1	1	1	1	1	1	1	5	3	1	1
3	1	1	2	4	2	5	5	5	5	5	5	5	5	5	1	4	4
4	1	2	2	4	2	3	3	2	1	1	1	1	1	2	2	3	3
5	1	1	2	3	2	1	1	1	3	1	1	1	1	1	3	1	1
6	1	1	2	4	2	5	1	5	1	1	5	5	5	1	1	4	3
7	1	2	3	4	2	1	1	3	3	3	3	3	3	2	2	2	2
8	1	2	2	4	2	3	3	3	3	3	1	1	1	3	2	1	2
9	1	2	2	1	2	5	5	5	5	5	5	5	5	5	4	4	1
10	1	2	2	4	2	4	4	4	4	4	3	4	3	3	1	3	4
11	1	1	2	4	2	1	2	1	1	2	5	1	1	5	4	1	4
12	1	2	2	4	2	1	3	1	3	3	3	3	3	3	1	3	3
13	1	2	2	4	1	1	3	1	3	3	3	3	3	3	1	3	3
14	1	2	2	4	2	4	5	5	5	5	4	5	5	5	1	4	5
15	1	2	1	4	2	1	3	1	1	1	2	1	1	1	2	3	5
16	1	2	2	4	2	1	1	1	1	1	1	1	1	1	2	1	5
17	1	2	2	4	2	5	5	5	5	5	5	5	5	5	5	5	5
18	1	2	2	4	1	1	1	1	1	2	1	1	1	1	5	2	5
19	1	2	2	3	2	5	3	5	5	3	2	5	1	1	3	1	3
20	1	2	2	4	2	4	3	4	4	2	4	3	4	4	5	5	3
21	1	2	2	4	2	3	1	1	1	1	1	1	1	3	1	1	1