# CUSTOMER INTEREST IN ARTIFICIAL INTELLIGENT DOMESTIC PRODUCT FOR MARKETING PURPOSE

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Report submitted in fulfilment of the requirements for the bachelor's degree of Technopreneurship

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### DECLARATION

I declare that this thesis entitled "CUSTOMER INTEREST IN ARTIFICIAL INTELLIGENT DOMESTIC PRODUCT FOR MARKETING PURPOSE" is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other

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#### APPROVAL

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#### **DEDICATIONS**

To my lovely parents and siblings, thank you for believing, support and encouragement for my education. Their understanding and faith in my talents have inspired me to pursue this research and overcome the challenges that have arisen along this journey. Also I would like to thank my supervisor and my friends for their advice and useful insights. Their knowledge and helpful input have greatly help me in the accomplishment of this study. Finally, I dedicate this report to all of the participants who kindly volunteered their time and ideas, as their contributions improved the research findings.



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#### ABSTRACT

This study investigates the primary elements influencing Malaysian consumers' interest in AI- powered household goods, as well as the consequences for marketing strategies. Using the Stimulus-Organism-Response theoretical framework, this study examines problems such as consumer awareness, cultural influence, economic considerations, and perceived value of AI products. Qualitative interviews were conducted with 6 participants who utilise AI technology on a daily basis in the Melaka district. The findings are likely to help firms and policymakers develop better marketing tactics, increase engagement and trust, and deploy AI technology. This study intends to contribute to the discussion of AI's role in modern marketing and consumer behaviour, as well as to promote innovation and economic progress in Malaysia and its environs.

Keywords: AI, Artificial Intelligence, marketing, technology, qualitative

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#### ABSTRAK

Kajian ini mengkaji faktor utama yang mempengaruhi minat pelanggan Malaysia terhadap barangan isi rumah berkuasa AI. Ia juga mengkaji kesan AI terhadap strategi pemasaran. Kajian ini mengkaji perkara seperti kesedaran pengguna, pengaruh budaya, pertimbangan ekonomi, dan nilai yang dirasakan produk kecerdasan buatan. Ia melakukan ini dengan menggunakan rangka kerja teori Rangsangan-Organisme-Tindak Balas. Di daerah Melaka, temu bual kualitatif telah dijalankan dengan 6 peserta yang menggunakan teknologi AI setiap hari. Penemuan ini mungkin membantu syarikat dan penggubal dasar membuat taktik pemasaran yang lebih baik, menggunakan teknologi kecerdasan buatan, dan meningkatkan penglibatan dan kepercayaan. Kajian ini bertujuan untuk memulakan perbincangan tentang peranan AI dalam pemasaran moden dan tingkah laku pengguna, serta untuk menyokong kemajuan dan inovasi ekonomi di Malaysia dan negara lain yang berdekatan.

Kata kunci: AI, Artificial Intelligence, pemasaran teknologi, kualitatif.

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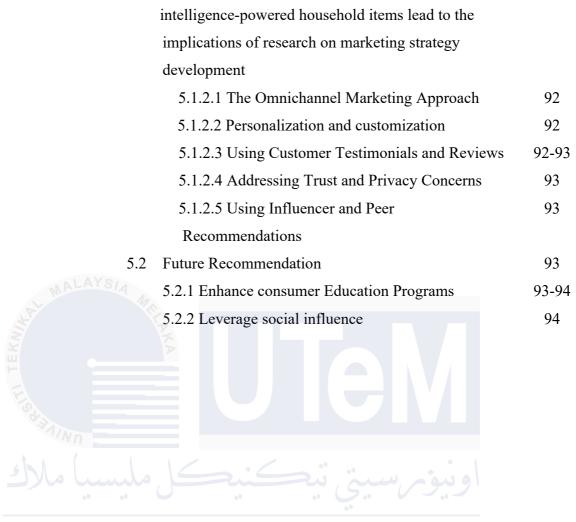
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#### **CHAPTER 1**



#### **1.0 Introduction**

In Malaysia, the usage of technology in the home is growing, with domestic items incorporating artificial intelligence (AI) to improve comfort and efficiency. For example, smart kitchen gadgets, air purifiers, and security systems are becoming increasingly popular.

Consumer interest in AI products might be influenced by certain cultural characteristics, such as the importance of interpersonal ties in Malaysian society. Products with user-friendly features and interactions are more likely to be approved. Economic aspects such as low prices and the additional value provided by AI goods also play an important role in garnering customer attention.

Understanding Malaysian customer behaviour is critical to properly selling AI solutions. This involves considering customer preferences, technological perceptions, and willingness to accept new developments. Understanding the demands and tastes of local consumers allows manufacturers to customise their marketing tactics and product development, ensuring that offers are relevant and appealing to Malaysia's rapidly developing market.

#### 1.1 Background of Study

The fast advancement of artificial intelligence (AI) has transformed many aspects of society, including economics, trade, and consumer behaviour. These developments bring a variety of possibilities and problems, necessitating a sophisticated approach from governments and corporations. AI's ability to transform decision-making processes, increase efficiency, and stimulate innovation in goods and services emphasises the importance of a strategic grasp of its consequences.

In this context, policymakers are entrusted with building an environment favourable to realising AI's promise while also addressing user concerns, particularly in handling daily chores such as home management. As the number of AI applications grows, there is an increasing interest in employing this technology to expedite business-to-consumer interactions. This study seeks to develop a complete conceptual framework that describes how businesses and consumers might use AIenabled technologies to improve behavioural outcomes in online customer contact.

Using a metaphorical lens, viewing AI systems as organisms, and a Stimulus-Organism-Response theoretical approach, this paradigm outlines the many forms of consumer interaction behaviours that corporations seek or uninvited. This behaviour serves as a stimulant for the AI organism to process customer-related data, influencing the AI's reaction and future human involvement, which includes the behavioural context of the customer encounter. The interplay of businesses, customers, and AI systems exemplifies the complex dynamics of modern marketing strategy, in which AI serves as a catalyst for improving customer interactions and driving commercial outcomes. Understanding and using the potential of AI-enabled systems allows businesses to adjust marketing efforts to customer preferences and behaviors, enabling meaningful engagement and mutual gain.

As the debate over the role of AI in marketing continues, it is critical to look further into the processes by which AI enhances consumer interaction and impacts decisionmaking. This study attempts to contribute to the discussion by delving into the synergistic link between enterprises, customers, and AI, and describing how this dynamic interplay impacts current marketing practice. Furthermore, by explaining the underlying mechanisms that drive AI-mediated consumer interactions, organizations may develop more effective strategies for using AI as a tool to improve engagement and brand loyalty. This study aims to provide a full knowledge of the multiple dynamics inherent in AI-driven marketing endeavors by using actual data and a solid theoretical foundation.

Furthermore, it attempts to investigate the convergence of AI, customer interaction, and marketing, giving a conceptual framework for how businesses might use AI-enabled systems to optimize behavioral results and improve the overall customer experience. By digging into the complexities of AI-mediated interactions, organizations may open up new opportunities for innovation and differentiation in an increasingly competitive marketplace.

Virtual assistants, smart home gadgets, home security systems, consumer electronics, and mobile applications are examples of widespread domestic AI technology in Malaysia, while precise information on domestic AI goods is not always available. The technology performs a variety of purposes, including household management duties, personalized help, and security solutions. However, adoption of domestic AI technology in Malaysia may be lower than in other countries, with availability changing based on local market conditions and supplier offerings. Overall, this introduction prepares the groundwork for a thorough examination of the complex interplay between businesses, customers, and AI systems in the marketing area, emphasizing AI's potential to transform customer engagement and promote company success. This research aims to give significant insights on harnessing AI for enhanced marketing outcomes in Malaysia and beyond, using an empirical study and theoretical approach.

In Malaysia, the integration of domestic AI technology has substantially revolutionized daily life, providing a range of solutions targeted at improving convenience, safety, and efficiency. One notable feature of this technology wave is the emergence of virtual assistants such as Google Assistant, Amazon Alexa, and Apple Siri. These assistants have become vital home tools, allowing users to easily handle activities ranging from setting alarms to managing smart gadgets with simple voice requests.

Virtual assistants are complemented by a profusion of AI-powered smart home gadgets such as lighting, thermostats and security cameras. These technologies work seamlessly with virtual assistants, giving customers more control over their homes while optimizing energy use and strengthening security measures. Furthermore, the introduction of AI-driven home security systems has improved residential security in Malaysia. These systems, which include advanced features for detecting possible threats, use AI-based picture processing to improve monitoring capabilities, giving homes peace of mind.

Furthermore, the incorporation of AI technology into consumer gadgets has heralded a new era of personalized experiences. Smart televisions, washing machines, and refrigerators with AI capabilities adapt to user behavior, automatically altering operations to maximize performance and energy savings. Furthermore, the prominence of artificial intelligence (AI) in mobile applications has transformed daily routines, with banking apps, online shopping platforms, and health apps using data monitoring to provide personalized services and advise. Collectively, these advances demonstrate Malaysia's adoption of domestic AI technology, pointing to a future defined by higher living standards and seamless integration of intelligent solutions into daily life.

#### **1.2 Problem Statement**

#### 1.2.1 Lack of Consumer Awareness and Understanding

Despite the growing availability of household AI products in Malaysia, many customers may be unaware of the capabilities and benefits that these technologies provide. This knowledge gap might slow adoption rates and restrict the commercial potential for AI- enabled devices. Consumers may be hesitant to invest in AI goods unless they have a clear knowledge of how technology may improve daily life and address common difficulties.

# 1.2.2 Cultural and societal influences

UNIVERS In Malaysian society, interpersonal ties and user-friendly interactions are highly valued. However, it is unknown how cultural preferences and societal conventions impact customer interest in AI-based household products. Understanding how cultural elements influence customer perceptions and preferences is essential for developing marketing tactics that resonate with Malaysian consumers. Failure to incorporate cultural factors may lead to mismatched marketing and decreased user engagement with AI technologies.

#### **1.2.3 Economic Considerations and Value Perception**

Economic considerations such as product cost and perceived value have a substantial impact on customer interest and purchase decisions. In Malaysia, where pricing is a major concern for many customers, it is critical to investigate how AI home goods are regarded in terms of cost and value when compared to traditional options. Developing measures to increase the perceived value of AI products, such as emphasizing their long-term advantages and cost-saving features, might assist in overcoming pricing barriers and driving higher adoption among Malaysian customers.

# **1.2.4** The amount of consumer understanding about the AI features contained in the product

The user's understanding of AI features in a product is frequently restricted, causing them to simply employ fundamental functionalities. One of the major issues is a lack of knowledge of the possibilities of increasingly advanced AI. Users may not see the full potential of the product's AI capabilities because they are unfamiliar with the technology. In addition, a lack of appropriate training or direction might be a barrier. If consumers are not given adequate information or training, they will only use simple, easyto-understand capabilities. Furthermore, users' investigation of more powerful AI features may be boosted by concerns about privacy and security. Furthermore, users' investigation of more powerful AI features may be boosted by concerns about privacy and security. For many consumers, understanding how AI systems will use or retain their data might prevent them from exploring more capabilities. As a result, taking a more proactive approach to educating and training customers about AI capabilities in products can assist overcome this issue and improve understanding and utilization of AI features.

#### **1.3 Research Questions**

I. How to understand the primary elements influencing customers' interest to use artificially intelligent household items and factors influencing consumer demand for AI products.

- II. What kind of customers' interest in artificial intelligence-powered household items and the effectiveness of domestic AI product marketing strategy.
- III. In what way the customers' interest in artificial intelligence-powered household items lead to the implications of research on marketing strategy development.

#### **1.4 Research Objectives**

- I. To know and understand the primary elements influencing customers' interest to use artificially intelligent household items.
- II. To identified and analyze the customers' interest in the artificial intelligencepowered household items are significantly important for the marketing strategies.

III. To determine the customers' interest in the artificial intelligence-powered household items would help the company in presenting better marketing plan.

#### 1.5 Scope of Study

This study will investigate the primary factors influencing customers' interest in adopting artificially intelligent household items. It will analyze the significance of this interest in marketing strategies, aiming to provide insights into its impact on the development of effective marketing plans. The scope includes examining consumer preferences, attitudes, and behaviors related to AI-powered household items within the context of marketing strategies.

#### 1.6 limitation of study

The study's goal is to obtain insights 7 people who actively use AI technology in their daily lives. The focus will be on the area surrounding Melaka. Face-to-face and online interviews will be the major data collecting strategy when using a qualitative methodology. The target respondents will be between the ages of 18 and 50, with a focus on individuals who have integrated domestic AI technology into their daily tasks and routines. This age range was chosen purposefully to represent a wide variety of consumers who may interact with AI technology in their daily lives.

The study aims to improve understanding of consumer interest in AI technology by taking into account demographic criteria as well as the practical implementation of AI in residential settings. Valuable insights are expected to emerge from extensive data collection and analysis within this unique geographical context, revealing light on the intricacies of AI adoption and usage trends among persons in the targeted age cohort. Finally, the findings are expected to drive strategic choices targeted at efficiently meeting consumer demands and preferences in the field of AI technology in Melaka, Malaysia, and worldwide.

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#### 1.7 Significance of Study

The importance of this final-year study rests in its investigation of customer interest in AI-powered household items for marketing in Malaysia. The study's investigation of factors influencing customer attitudes and privacy perceptions provides valuable insights for businesses and policymakers in tailoring strategies, increasing consumer trust, and driving adoption of AI technology, fostering domestic innovation and economic growth.

# 1.8 Summary

Background research on the research subject, problem statements, research objectives, study scope and study significance were all addressed by the researcher in this chapter.



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#### **CHAPTER 2**



This chapter examines customer interest in AI-powered home items in Malaysia for marketing reasons, focusing on cultural, economic, and technological implications on consumer behaviour. The study's goal is to uncover important elements driving interest in AI technology, evaluate its usefulness for marketing tactics, and provide solutions to improve marketing strategy. The insights will help firms and governments change strategy, build customer trust, and promote AI use. The literature review in section 2 will give a full grasp of consumer perceptions and behaviours by reviewing current research and conceptual frameworks. It also highlights relevant research that relate the examined variables and provides a conceptual framework with hypotheses for determining the most important links between independent and dependent variables. This review helps to build a complete grasp of previous research relevant to the study's aims.

#### 2.1 Technology

The definition of technology was a collection of methods, systems, tools, machines, devices, materials, and information utilized in various fields to solve problems, increase productivity, and achieve goals. Technology is a vast field that entails using human knowledge and endeavours to alter the natural world to satisfy human needs and ambitions. This concept accurately captures the complexity and wide- ranging uses of technology today. According to Yoo et al. (2012), technological developments can have a significant impact on businesses and need the adaptation of operations, services, and products

Artificial intelligence (AI) is a field of computer science that focuses on developing intelligent systems capable of doing tasks that need human-like intellect, such as learning, problem solving, natural language understanding, and pattern recognition. AI has applications in healthcare, banking, transportation, and entertainment, where algorithms and models evaluate massive volumes of data to make judgements or predictions (Lemon & Verhoef, 2016).

AI is divided into two categories: narrow AI (weak AI), which performs specialised tasks such as speech recognition, and general AI (strong AI), which strives to do any intellectual work that humans can. Advances in machine learning, neural networks, and deep learning allow AI systems to learn from data, recognise patterns, and make judgements without human intervention (Hagendorff, 2020).

AI's progress offers efficiency and new capabilities across sectors, but it also poses ethical concerns, such as employment displacement, data privacy, and prejudice. Addressing these problems is critical, necessitating regulations and norms for safe AI usage. AI seeks to emulate human cognition and behaviour in robots or systems, with classifications including mechanical (automation), analytical (trend modelling), intuitive (content creation), and sympathetic (social robots) (Lemon & Verhoef, 2016).

#### 2.2 Knowledge about Artificial Intelligence (AI) technology

AI technology, often known as artificial intelligence, is a fast-emerging discipline that aims to create computers capable of executing activities that would normally need human intellect, such as voice recognition, problem solving, learning, and decision making. Artificial intelligence has the ability to transform industries such as healthcare, finance, and transportation by increasing efficiency and capacities. However, its implementation raises substantial ethical and social concerns, necessitating careful assessment of long-term consequences.

Machine learning, a critical component of AI, enables computers to learn from data and make predictions or judgements, allowing AI systems to develop and adapt indefinitely. Recent improvements have significantly enhanced several sectors, increasing operational efficiency and results (Kumar 2016).

In marketing, AI integration provides significant benefits such as personalised offers, more consumer engagement, and stronger customer connections. However, it creates ethical considerations, such as discrimination, privacy, and data protection. To ensure responsible and ethical AI use, it is necessary to address these ethical problems with involvement from a wide range of stakeholders.

Researchers such as Huang and Rust (2021) and Davenport et al. (2020) have created strategic planning frameworks for evaluating the ethical implications of AI in marketing. These frameworks emphasise the significance of addressing societal and environmental well-being while employing AI in marketing. AI's capacity to analyse massive volumes of data in real time can dramatically boost customer engagement (Sterne, 2017). Additional study is required to better understand online customer behaviour and the implications of AI-powered personalised answers (Kaartemo & Helkkula, 2018).

Finally, AI in marketing may be viewed as a strong driver of sustainable usage, encouraging individual lifestyle changes while pushing economic and socio-cultural development towards sustainable consumption (White, 2019).

#### 2.2.1Artificial Intelligence (AI) Technology Domestic

In recent years, artificial intelligence in household appliances has altered living experiences by providing unprecedented ease, efficiency, and personalisation. AI- powered gadgets, such as smart speakers, robotic hoover cleaners, and home security systems, simplify daily tasks and impact customer behaviour. Usability, perceived value, privacy concerns, and confidence in AI technology are key elements impacting consumer acceptance and satisfaction, providing marketers with insights into how to improve customer engagement and accelerate AI home product adoption (Milano, 2021).

Malaysia is making major investments in research and development to advance AI technologies for home usage, promoting the rapid adoption of smart home gadgets, virtual assistants, and personalised services. This trend is being pushed by a technologically literate populace and growing awareness of AI's benefits (Dhar, 2020). Economic factors, technological infrastructure, and public perception all have an influence on the adoption of indigenous AI technology in Malaysia. AI-powered virtual assistants, such as Amazon Alexa and Google Assistant, are gaining popularity due to their capacity to adapt to local tastes, provide multilingual support, and manage household tasks. However, a lack of awareness of AI among Malaysian consumers influences their purchase decisions, emphasising the importance of bridging this information gap in order to increase adoption.

Promoting homegrown AI technology in Malaysia can boost its creativity, productivity, and economic competitiveness. Implementing AI in sectors like health, education, and agriculture may enhance services and provide new employment possibilities, reducing dependency on foreign technology and increasing technical sovereignty (Milano, 2021).

#### **2.2.2 Types of AI-Powered Household Products**

#### 2.2.2.1 Smart Speakers

The Amazon Echo with Alexa can play music, deliver weather updates, manage smart home devices, and answer queries via speech, making it a very helpful household assistant. Meanwhile, Google Home with Google Assistant functions similarly to Amazon Echo, providing improved speech recognition capabilities for a variety of domestic activities. Both gadgets are intended to make daily living easier by linking consumers with smart technology in their homes. With these revolutionary capabilities, Amazon Echo and Google Home are popular alternatives for anybody looking to experience the ease of contemporary technology at home.

#### 2.2.2.2 Robotic Vacuum Cleaners

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Modern robot hoovers cleaners have transformed the way we clean our homes by merging cutting-edge technology and artificial intelligence. For example, the iRobot Roomba employs artificial intelligence to intelligently map and clean the house, avoid obstructions, and even return to a charging station on its own. With this feature, Roomba can clean efficiently and effectively without requiring much human participation. Ecovacs Deebot, on the other hand, is outfitted with object recognition technology and can execute cleaning tasks tailored to the demands of the home. Deebot can recognise and adapt its cleaning based on the house's circumstances and layout, ensuring that every area is thoroughly cleaned. With this technology, these two gadgets provide smart and user-friendly house cleaning solutions, making living more pleasant and dust-free.

#### 2.2.2.3 Smart Refrigerators

A smart refrigerator is a contemporary appliance that combines the capabilities of a technology refrigerator with artificial intelligence (AI). For example, the Samsung Family Hub features a huge touch screen on the door, an inside camera to monitor the contents of the fridge, and an AI that can recommend meals depending on available ingredients. Additionally, the LG InstaView ThinQ has capabilities comparable to the Samsung Family Hub, such as the option to order meals right from the fridge. This technology allows users to more easily manage food components and organise daily menus, making life more practical and efficient. This device demonstrates how technology continues to advance in order to make domestic activities easier.

#### 2.2.2.4 Smart Thermostats

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The Nest Thermostat is a smart device that learns the user's behaviour and automatically adjusts the house temperature, saving energy. It may also be operated remotely via an app. Meanwhile, Ecobee SmartThermostat monitors temperature and humidity in many rooms and has voice assistant integration. These two smart thermostats have a variety of innovative features meant to improve your home's comfort and energy efficiency. With more advanced technology, this gadget not only facilitates temperature adjustment but also helps to cut energy consumption, therefore benefiting the environment and saving money.

#### 2.2.2.5 Smart Lighting

Smart lighting solutions, such as Philips Hue and LIFX Smart Bulbs, make it easy to set the mood in your house. Users may manage illumination with an integrated app, voice commands, or smart home automation. These innovative capabilities allow you to modify the colour and intensity of the light based on your needs and mood. These two systems provide a broad range of options, whether you want to create a peaceful and relaxing ambiance at night or spice up a party with a unique colour combination. As technology advances, the future of home lighting brightens, and personalisation becomes easier and more fun.

#### 2.2.2.6 Smart Security Systems

Home security is becoming more sophisticated in an age of WERS ever- changing technology, thanks to technologies such as the Ring Video Doorbell and Nest Cam. The Ring Video Doorbell uses a camera and artificial intelligence to detect movement near the front door and send real-time notifications to the user's phone, giving them peace of mind even while they are away from home. Meanwhile, the Nest Cam provides extra safety by recognising faces and voices and sending quick warnings if it detects suspicious behaviour. This technology allows consumers to monitor their home security more effectively and responsively, making it more intelligent and connected.

#### 2.2.2.7 Smart Washing Machines

Smart washing machines, such as the LG AI DD Washing Machine and the Samsung WW9800T, have transformed the way we perform housework as technology has advanced. LG employs artificial intelligence to determine the kind of cloth and amount of soiling, then adjusts the wash cycle to get the optimum results. On the other hand, the Samsung WW9800T includes an AI function that learns from user patterns and recommends an effective washing cycle. With this innovation, both washing machines provide remarkable simplicity and efficiency, allowing customers to get ideal washing outcomes with no effort.

#### 2.2.2.8 Smart Ovens

The June Oven and the Tovala Smart Oven represent the pinnacle of kitchen innovation. June Oven employs an integrated camera and artificial intelligence to recognise the sort of food placed inside and automatically modify the cooking parameters. The Tovala Smart Oven, on the other hand, uses artificial intelligence technology to read QR codes on food packaging, allowing the oven to prepare meals automatically and precisely. These two technologies bring ease and intelligence to the kitchen, welcoming the future of cooking with a creative attitude that inspires.

#### 2.2.3 AI Evolution and Trends in Home Products

The growth and trends of AI in home items have had a substantial influence on how they are designed, manufactured, and utilised, influencing customer behaviour and preferences. One of the most recent developments is the integration of voice assistants like Amazon's Alexa and Google Assistant into numerous products and appliances. This enables consumers to operate and interact with home items via voice commands, making the user experience more intuitive and seamless (McLean & Osei-Frimpong, 2023).

Furthermore, clever AI systems that can learn and adapt to human preferences and habits are becoming increasingly popular. These systems may automate a variety of activities, including temperature, lighting, and security settings, based on human behaviour and scheduling (Ratajczak et al., 2023). AI increases the efficiency and performance of domestic appliances including refrigerators, washing machines, and ovens. These devices can now analyse consumption trends and make personalised suggestions for energy efficiency and peak performance (Bernard, 2023).

Not only that, but AI is employed to improve the culinary experience by incorporating food recognition technology into smart ovens, as well as enhancing the cleaning experience with robot sweepers and mops that use AI to map and navigate the house effectively (The Conference Board, 2023). Finally, the expansion and trend of AI in home items strives to provide a seamless, personalised experience while also simplifying daily duties, hence improving consumers' quality of life. As AI technology advances, we should expect more inventive and smart household items (McLean & Osei-Frimpong, 2023).

#### 2.3 Factors Influencing Consumer Demand for AI Products.

#### 2.3.1 Convenience and Efficiency

Convenience and efficiency are significant reasons for the rising interest in AI- powered home products. These devices, illustrated by AI assistants such as "Hey Alexa," have gained tremendous public appeal by making daily activities easier. They provide hands-free operation, allowing users to operate smart home devices, create reminders, and access information quickly and conveniently with voice commands, making household management easier (Beckers, van Doorn, & Verhoef, 2018).

The appeal of AI voice assistants stems mostly from their capacity to improve convenience and utility. These technologies let users to engage with their home environment more effectively by removing the need for physical input. This not only simplifies mundane tasks, but also allows users to better manage their hectic calendars.

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According to research, the incentives for adopting and using AI voice assistants are many, including utilitarian, symbolic, and social advantages. While the practical benefits are obvious, customers also value the gadgets' capacity to hold human-like conversations and adjust to their preferences over time. However, worries about privacy may limit widespread use of these technologies, emphasising the need of developers prioritising security and privacy in their designs (Sundar et al., 2017).

To improve the user experience and increase acceptability, developers and service providers must prioritise improving AI voice assistants' conversational abilities and resolving security issues. By guaranteeing that these gadgets can learn and adapt to user preferences, developers not only deliver extra societal advantages, but also foster user confidence and trust. By tackling these crucial concerns, the AI home goods market may continue its rapid growth.

#### 2.3.2 Trust and Security

The use of artificial intelligence (AI) in marketing has altered our interactions with clients, but it also highlights the critical importance of trust and transparency in AI operations. To improve user trust, AI systems must be fair and open (Yun, 2021). Consumers must understand how AI-powered marketing approaches work, which necessitates transparent procedures and clear communication strategies.

Transparency in AI operations necessitates organisations being open about how they gather, utilise, and safeguard consumer data. This includes a clear description of data usage regulations and how AI algorithms evaluate data. Businesses may address client concerns about privacy and data security, which are common when dealing with AI technology. Beckers, van Doorn, and Verhoef (2018) emphasise the need of transparency, noting that consumers are more likely to trust AI systems if they understand how they work and how their data is utilised.

Transparency encompasses both the technological and ethical elements of AI applications. Enterprises should ensure that their AI systems are devoid of prejudice and discriminatory behaviour, including monitoring and changing algorithms to prevent unexpected consequences. Businesses may build stronger and more trustworthy connections with their customers by committing to ethical and transparent AI policies (Hermann, 2021). Transparency extends to the

marketing message itself. AI-powered marketing approaches that personalise content and offers must be authentic while protecting user privacy. Users may be uneasy with an obtrusive or opaque personalisation technique. Businesses should try to create marketing strategies that are not only effective, but also ethical and transparent in their use of AI.

This is because trust and transparency are critical for using AI into marketing. Businesses must be diligent in making their AI processes comprehensible and transparent, while also addressing consumer concerns about data security and ethical usage. Enterprises can boost client trust by providing a transparent environment, which will improve the overall performance of their AI-powered marketing campaigns.

#### 2.3.3 Cost Efficiency

Cost efficiency is a critical concern in current marketing plans, and the use of artificial intelligence (AI) provides a tremendous potential to optimise spending while enhancing effectiveness. Businesses that use AI-powered solutions may simplify their marketing efforts and realise considerable cost savings in a variety of areas.

One of the primary ways in which AI helps to cost savings is through automated content development and dissemination. AI-powered technologies enable organisations to automate the generation of compelling and relevant content for their intended audience. These technologies employ natural language processing and machine learning to analyse data, discover patterns, and create user-friendly content. Companies that automate this process can save time and resources that would otherwise be spent on manual content generation, save labour expenses, and allow marketing teams to focus on more strategic duties like campaign planning and analysis (Kaartemo and Helkkula, 2018).

Furthermore, AI allows for the effective dissemination of marketing information across different platforms. AI platforms can identify the most effective channels and times to contact target consumers, hence increasing the effectiveness of marketing initiatives. Businesses that automate content distribution may ensure that their messaging reaches the proper audience groups while wasting as few resources as possible. This tailored strategy not only increases the impact of marketing activities, but it also reduces the expenses involved with addressing irrelevant consumers (Hermann, 2019).

AI's capacity to increase targeting capabilities is another critical component in cost-effectiveness. AI algorithms can find highly relevant audience groups for targeted advertising campaigns by analysing enormous volumes of data such as demographics, browsing behaviour, and purchase history. This exact targeting guarantees that marketing expenditures are deployed more efficiently, sending ad spend to the most likely group to convert. As a consequence, firms may get a better return on investment (ROI) from their marketing efforts, maximising the value of each advertising dollar (Kaplan and Haenlein, 2019).

AI can help to streamline marketing processes while also reducing the requirement for huge marketing staff. Automated systems may accomplish activities that would otherwise need a large crew, resulting in considerable labour and operating cost reductions. For example, AI-enabled factories can replace people allocated to monotonous jobs with robots, leaving only professionals trained to operate these AI- driven systems. This method not only lowers costs but also improves manufacturing efficiency and profitability (Ramkumar & Ellie Jin, 2019).

This is because incorporating AI into marketing may result in cost savings in a variety of areas, making marketing operations more efficient and successful. Embracing AI-driven solutions is both a strategic and practical requirement for organisations that wish to succeed in today's competitive market.

#### 2.3.4 Price and Value

The incorporation of artificial intelligence (AI) into home products has triggered a paradigm change in customer-company interactions. As families embrace technological advancement, they not only gain more comfort and efficiency, but they also form stronger emotional bonds with the corporations that drive these breakthroughs. One of the most prominent benefits of adopting AI-powered household items is the increased brand loyalty and perceived value among customers.

When people integrate AI-powered devices into their daily lives, they naturally gravitate towards organisations who are at the forefront of offering such cuttingedge solutions. This initial fascination develops into long-term commitment as buyers see the practical benefits of these items for themselves. Consumers build a strong affection for the product due to its seamless connection with other smart devices, personalised user experiences, or time-saving functions (Kumar,2016)

Furthermore, as users interact with these AI-powered goods, they not only gain practical advantages but also become ardent brand evangelists. Positive experiences with home AI devices encourage users to share their enthusiasm with their social connections, therefore serving as brand ambassadors. According to Wiedmann (2020), pleased customers multiply the brand's reach and influence through authentic word-of- mouth marketing, increasing the brand's reputation and market confidence.

Furthermore, Stachl (2020) confirms that consistent supply of value via AIpowered home products improve brand trust and dependability in the eyes of customers. Companies that invest in cutting-edge technology and prioritise user experience are viewed as forward-thinking and trustworthy, which strengthens the basis of brand loyalty. This emotional connection goes beyond transactional exchanges, instilling a sense of belonging and loyalty to the brand (Appel, 2019).

In final analysis, incorporating AI technology into home objects not only increases usability but also fosters a strong bond between customers and businesses. Marketers use domestic AI solutions to build long-term relationships with their customers by providing constant value and instilling trust (Matz, 2019).

User happiness and experience have a substantial impact on future interest and engagement levels. When customers have a favourable experience with a product or service, they are more likely to be loyal and interested in future opportunities. Previous user pleasure serves as a trigger, altering people's thoughts and expectations for their future experiences with a brand or product.

User Satisfaction and Experience

2.3.5

Li and Huang (2019) discovered that high levels of customer satisfaction lead to enhanced brand loyalty and good word-of-mouth referrals. Satisfied consumers not only continue to support the brand, but they also actively recommend it to their networks, so increasing its reach and impact. Conversely, unpleasant user experiences might discourage future participation and potentially result in customer turnover.

Furthermore, the user experience influences people's future interests. A flawless, delightful experience builds trust and confidence in the business, encouraging people. to try new items or services. A negative user experience, on the other hand, might lead to disengagement and a desire to avoid future interactions with the company.

As a result, firms must prioritise user pleasure and always seek to improve the user experience in order to retain client interest and loyalty over time. Businesses that continuously provide great experiences may create long-term connections with their consumers, driving future growth and success.

### 2.4 Domestic AI Product Marketing Strategy

The marketing approach for home AI products focuses on ease, efficiency, and personalised experiences. Emphasising smooth interaction with current smart devices and highlighting time-saving capabilities will help attract tech-savvy customers. Using social evidence, such as testimonials and user-generated content, may also help to develop trust and credibility. Furthermore, giving clear information regarding data security and privacy safeguards reassures potential consumers. Continuous innovation and upgrades to improve user experience help domestic AI products stand out in the market.

#### 2.4.1 Effective Marketing Strategies

To attract clients, AI-based household goods must be marketed in an inventive and strategic manner. One of the most effective tactics is consumer education and awareness. Companies, for example, may offer instructional content like blogs, video tutorials, webinars, and e-books to demonstrate the benefits and functionality of AI products. Furthermore, product demos on websites or in shops allow customers to experience the product's advantages firsthand. The usage of influencers and testimonials is also crucial. Collaboration with technology or lifestyle influencers with a suitable audience can generate good feedback, while pleased customer testimonials can be released to foster confidence.

product provides, are all highly successful. Social media platforms such as Facebook, Instagram, and Twitter may be used to promote products through sponsored advertisements and organic content, as well as interactive campaigns

like competitions or challenges.

Collaborating with retail outlets with large client bases and other technology businesses to build an ecosystem that supports AI goods is another smart approach. Discounts and bundling deals, as well as referral programmes that reward customers for referring items to friends and family, can pique early interest. The content. The use of data and analytics to monitor customer behaviour, adapt marketing techniques, and provide personalised product suggestions can improve relevance. Helping clients resolve challenges requires responsive customer assistance and comprehensive information.

Participation in technology fairs and product launches may generate buzz and media attention. Companies may use these tactics to establish effective marketing campaigns that promote AI-based home goods and increase consumer loyalty. Companies such as Google Nest, for example, have employed this method to great success by having product demos in huge stores and releasing their goods using influencer technology.

Marketing tactics for home AI products prioritise ease, efficiency, and a personalised experience. Highlighting seamless connectivity with current smart devices and demonstrating time-saving capabilities might appeal to tech-savvy clients. Using social proof in the form of testimonials and user-generated material may also assist to develop trust and credibility with future users. Furthermore, offering explicit information on data security and privacy safeguards reassures customers. Continuous innovation and enhancement to improve user experience set domestic AI products apart in the market (Li and Huang, 2019; Grewal et al., 2017). Furthermore, successful marketing tactics for promoting AI goods include using generative artificial intelligence (GAI) to develop personalised content and marketing offers. GAI solutions allow for the provision of complex replies suited to individual tastes, making it easier to implement personalised marketing tactics on a larger scale. This strategy maximises reach and engagement, resulting in a better customer experience and more loyalty (Guzman, 2018).

Furthermore, creating branded skills (apps) for AI voice assistants that provide utilitarian value and convenience, as well as chances for social engagement and user preference learning, can enhance the entire user experience and promote adoption (Juniper & Research, 2018). Overall, aligning marketing tactics with consumer preferences and leveraging breakthrough AI technologies may successfully promote and boost market adoption of AI goods (Sundar et al.2017).

#### 2.4.2 Influence of Social Media and Digital Marketing

Using social media and digital marketing efficiently may significantly increase customer knowledge and interest in AI-based household products. Engaging and instructional information is one of the most effective methods to do this. Social media is an excellent venue for distributing video lessons, infographics, and blog pieces that explain the inner workings and benefits of AI solutions. For example, a film demonstrating how AI gadgets may save time and enhance household efficiency might pique the interest of a large audience. For example, an influencer who demonstrates the usage of AI goods such as automated vacuums and automatic chargers that can clean the house without the need for physical energy, presents a clear image of the ease and utility of such items in everyday life.

Targeted ad campaigns are extremely essential in digital marketing. Companies may target the most appropriate potential clients, such as young families or busy professionals searching for effective home solutions, using platforms like Facebook Ads and Google AdWords. The usage of influencers and microinfluencers, who may influence their audience's purchase decisions, is also successful. Collaboration with technology or lifestyle influencers with a relevant audience can result in credible and authentic product reviews. For example, the target market may be couples who both work and do not have time for physical domestic duties. They rely on AI technologies controlled by smartphones to regulate many parts of the home, such as lighting and automated gates.

Engagement and connection on social media may boost client loyalty and engagement. Companies may utilise platforms such as Facebook and Instagram to communicate with customers, answer inquiries, and get direct feedback. Contests and freebies are also beneficial in raising awareness and interest in AI products, while user- generated material, such as testimonials and reviews, may contribute to trust and legitimacy. Continuous analysis and optimisation with digital analytics solutions is critical for understanding campaign results and optimising marketing strategy. Companies may utilise these tactics to enhance awareness and interest in AI-based home products via social media and digital marketing, build strong customer connections, and drive sales (Ashley and Tuten, 2015).

#### 2.5 Implications of Research on Marketing Strategy Development

#### 2.5.1 Recommendations for Enterprises

Companies may improve their social media presence by developing a stronger marketing plan for AI-powered household items. This may be accomplished by creating more engaging, instructive, and relevant information, such as tutorial videos, infographics, and blog articles that clearly and appealingly convey the benefits of AI technologies (Kim & Ko, 2019).

Companies should also optimise their digital advertising strategies to reach the most relevant demographics and prospective consumers. This may be accomplished by utilising the targeting options given by digital advertising platforms like Facebook Ads and Google AdWords (Ashley & Tuten, 2015).

Furthermore, collaborating with influencers and micro-influencers with a relevant and trustworthy audience might help AI products' marketing reach grow. To ensure accurate and compelling ratings, companies should select influencers that align with their values and target market (Kim & Kim, 2023).

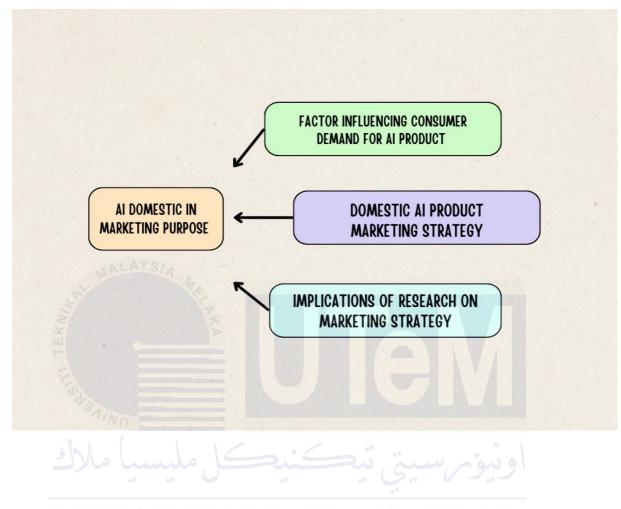
To build a stronger relationship with customers, businesses must actively communicate with them via social media. This may be accomplished by answering inquiries, providing product tips and techniques, and organising customer competitions and conversations (Kim and Lee, 2020).

Finally, organisations must continue to analyse and optimise the efficacy of their marketing initiatives via digital analytics tools. Understanding developing data and trends allows businesses to detect new possibilities and obstacles and change their marketing strategy in real time (Kwon & Lee, 2018). By implementing these guidelines, businesses may develop a more effective and efficient marketing plan for AI-based household products, improve consumer knowledge and interest, and build customer connection.

### 2.6 **Proposed Conceptual Framework**

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A theoretical framework is a conceptual structure that guides research by directing study topics, data collecting, analysis, and interpretation of findings. It situates research within existing knowledge and theory, so giving a foundation for comprehending the phenomena under investigation. In the area of domestic AI technology for marketing, the theoretical framework may include a variety of ideas and notions about domestic technical AI.



UNIVERSIT Figure 2.1 Proposed Conceptual Framework.

#### 2.7 Hypothesis

The hypothesis set for this study is

#### Hypothesis 1 (H1)

**H0:** To know and understand the primary elements influencing customers' interest to use artificially intelligent household items.

H1: There is a significant relationship between understanding the primary elements influencing customers' interest to use artificially intelligent household items and factors influencing consumer demand for AI products.

#### Hypothesis 2 (H2)

**H0:** To identified and analyse the customers' interest in the artificial intelligencepowered household items are significantly important for the marketing strategies.

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**H1:** There is a significant relationship between identifying and analyzing customers' interest in artificial intelligence-powered household items and the effectiveness of domestic AI product marketing strategy.

#### Hypothesis 3 (H3)

**H0:** To determine the customers' interest in the artificial intelligence-powered household items would help the company in presenting better marketing plan.

**H1:** There is a significant relationship between determining customers' interest in artificial intelligence-powered household items and the implications of research on marketing strategy development.

#### 2.8 Summary

To conclude, this chapter has offered a thorough summary of the essential concepts and phrases associated with the research issue. The information obtained from secondary sources, such as articles, journals, websites and e-books, has added to the study's firm foundation of knowledge. The identification of variables has paved the way for the formation of significant hypotheses to be tested in the research. Furthermore, the development of conceptual frameworks has aided in a better understanding of the connections between the variables under this research of investigation



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#### **CHAPTER 3**



#### **3.0 Introduction**

This chapter goes into the data collecting methodologies, processes, procedures, and samples used to research customer interest in Artificial Intelligence (AI) home goods for marketing purposes. The study's goal is to better comprehend research procedures from the standpoint of both customers and experts. It looks at aspects including emotional considerations, economic reasons, AI technological capabilities, consumer preferences, marketing delivery skills, product propositions, and the marketing strategies used to assess the product.

Research techniques and methodology are sometimes used interchangeably. The term "method" refers to the methods of data collection and analysis, which include qualitative (non- statistical) and quantitative (statistical) techniques, as well as interviews, observations, and surveys. Understanding these methodologies is critical for researchers to make sound judgements regarding their research strategy. This chapter gives a complete explanation of the research methodology used, demonstrating how the study was carried out to provide extensive insight into client demand in AI household goods.

3.1 Research Design 3.1.1 Types of Research Design

**UNIVERS** A research design is the overarching approach or plan that a researcher uses to tackle a particular research topic or purpose. The framework and procedures used to gather and examine data to respond to research questions are all included. According to Nayak and Singh (2015), research design is a process that aims to establish a plan of activities to respond satisfactorily to research questions identified in the exploratory phase, including selecting research methods, operating structures of interest, and developing appropriate sampling strategies. In this context, research design serves as a strategy that utilizes empirical data to address research questions.

Furthermore, Saunders, et al. (2019) identified three types of research design that is exploratory research, this kind of study is used by analysts to identify phenomena and comprehend a subject more thoroughly. study that is descriptive seeks to accurately describe people, places, or things that are pertinent to the study questions. Explanatory study is carried out to examine a situation or problem with the aim of elucidating the link between factors.

In light of this, the researcher will conduct a descriptive study to determine the importance of Artificial Intelligence (AI) to the company's performance. This methodology was selected because descriptive research may successfully use specific data gathering methods such as questionnaires.

#### 3.2 Methodological Choice

There are three methodologies to choose from Quantitative research involves gathering and analysing structured and organized data that can be represented numerically. It emphasizes objectivity and relies on statistical analysis to draw conclusions from the data. This approach often involves large sample sizes, standardized measures, and the use of surveys, experiments, or statistical analysis of existing datasets. Quantitative research aims to uncover patterns, relationships, and generalizability of findings to a broader population. (Goertzen, 2017).

Qualitative research focuses on understanding people's thoughts, concepts, experiences, and behaviours in-depth. It involves gathering rich, descriptive data through methods such as interviews, focus groups, case studies, discourse analysis, and literature reviews. (Thattamparambil, 2020). Mixed methods research is an approach that combines quantitative and qualitative methods within a single study. It involves collecting and analysing both numerical and textual data to provide a comprehensive understanding of a research problem. Mixed methods research aims to capitalize on the strengths of both quantitative and qualitative approaches, allowing for a more holistic exploration of complex phenomena. (Saunders et al., 2019). As a

result, qualitative methodologies may be used to assess customer interest in products in artificial intelligence for marketing purposes.

#### **3.3 Primary and Secondary Data Source**

A primary data source is the first information acquired directly from the source for a certain research study or investigation. Surveys, experiments, observations, and interviews are used to collect this information directly from the source. Researchers can use primary data sources to gather raw, unedited data relevant to their study objectives.

A secondary data source is a collection of information obtained for purposes other than the present research endeavour. This information has previously been gathered, and it might have originated from databases, government papers, research publications, or other published sources. Researchers employ secondary data sources, which they then analyse and interpret to support their own findings or answer their own research questions. Secondary data collection is faster and easier than primary data collection since primary data collection requires the researcher to cover the full process. Although original data takes longer to process, the results will be more accurate and dependable. As a result, the researcher will employ both data sources for this investigation.

#### **3.4 Sampling Design**

The two most significant components of study sample design are the sample location, and the sampling technique utilized. The sample location refers to the geographic region or location where the sample will be collected. In this context, the research focuses on the region surrounding Melaka, Malaysia.

Next, the sampling methodology is the procedure for selecting a sample from the target population. In this study, numerous sample approaches can be explored, including simple random sampling, cluster sampling, and purposive sampling. The goal of the research, availability, and target demographic characteristics should all be considered while selecting sample methodologies.

Researchers may guarantee that the sample taken accurately represents the population and yields trustworthy results by selecting relevant sample locations and using proper sampling methodologies. This is a critical stage in guaranteeing the validity and generalizability of research findings, as well as laying a solid platform for further analysis and interpretation.

#### 3.5 Research Strategy

A research strategy refers to a general plan or approach that guides the overall direction of a research study. It outlines the key steps, methods, and techniques to be employed to address the research objectives and answer the research questions. One common research strategy is the survey method, which involves collecting data from a sample of individuals using questionnaires or interviews. Surveys are often used when researchers aim to gather information from a large population and seek to quantify opinions, attitudes, behaviours, or characteristics. (DeFranzo, 2019)

#### 3.5.1 Interview

Interviews are a data gathering approach that involves direct interaction between researchers and respondents. They seek deep insights into people's perspectives, attitudes, or experiences with the study issue. Interviews can be conducted face-to-face, over the phone, or online, depending on respondent availability and research needs.

#### 3.5.2 Flow of Interview Protocol

The flow of the interview procedure serves as a guide for the questions that will be asked of the participants. This covers the order of the questions and the type of open questions in the topic to be covered. The design should enable researchers to collect relevant and thorough data. This flow helps to maintain consistency and attention during the interview, ensuring that all relevant areas of the study topic are covered.

In addition, the methodology enables researchers to avoid unclear or irrelevant queries. Also, the methodology enables researchers to avoid unclear or irrelevant queries. As a result, the interview's goal is more successfully achieved, with the data acquired being usable and reliable for subsequent research. Furthermore, the interview methodology provides for a fluid interaction between the researcher and the subject, resulting in a comfortable and open atmosphere for information exchange.

#### 3.5.3 Pilot Test

In this study, the researcher will conduct a pilot test to verify that all respondents understand the questions and achieve better findings. A pilot trial is a tiny preliminary study performed in research to evaluate a planned study before it is fully implemented. The pilot test aims to discover the respondent's absence of clear items (Aslam et al., 2020). Furthermore, the pilot test will identify any errors or flaws in the questionnaire, which the researcher may then rectify before distributing it to respondents. The pilot test was carried out by interviewing a small number of participants who are representative of the target population, with the goal of assessing the clarity, relevance, and relevance of the questions, as well as identifying any potential problems or technical difficulties that may arise during the interview. The pilot test findings will be utilised to modify and alter the interview methodology before it is employed in the main study (Aslam et al., 2020).

# ويورسيني نيڪيڪي مليسيا مارک 3.6 Data analysis\_\_\_\_\_

Phenomenological analysis is a strategy used to comprehend and characterise people' life experiences in a broader perspective. The researcher concentrates on providing a thorough and in-depth account of the study subject's experiences. This strategy emphasises the subjective interpretation and significance that individuals assign to their experiences. Thus, phenomenological analysis allows for in-depth inquiry into how people see and interpret the world around them. This technique allows researchers to delve deeper into subjective experience, appreciate its complexities, and investigate its consequences in a broader perspective. Phenomenological analysis, which focuses on a subjective perspective, gives vital insight into the reality experienced by individuals while also expanding our knowledge of numerous elements of human existence.

#### 3.7 Validity and Reliability

Evaluating the study, reliability and validity are used. They refer to a process, a procedure, or a test for evaluating the goodness or unfavorability of something. Reliability and validity are the terms used to describe how consistently a measurement is made. When designing our study design, selecting a methodology, and summarizing the findings, reliability and validity are crucial factors to consider, particularly in quantitative research.

#### 3.7.1 Validity

Validity indicates that the data acquired is acceptable for the measuring instrument's intended application (Surucu & Maslaki, 2020). The use of approved measurement devices guarantees that the analytical findings are accurate. Internal validity relates to how effectively the independent variable may be used to explain the observed effect. Internal validity is achieved when the impact of the dependent variable is entirely due to the independent factors. This is the extent to which an outcome may be modified.

#### 3.7.2 Reliability

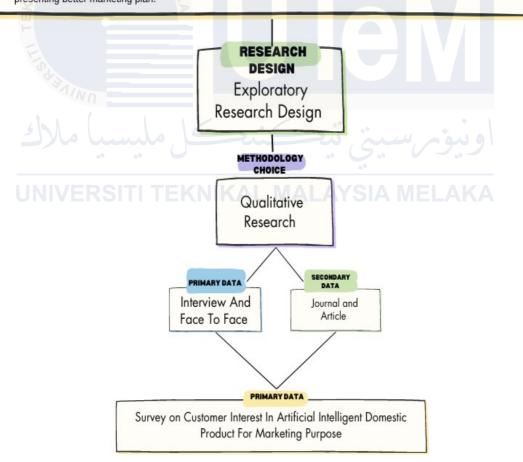
In qualitative research, reliability refers to the consistency of data collection, processing, and interpretation. It is not only important to have consistent measurements, but also to be reliable when comprehending and analysing data. Strategies for increasing trustworthiness include providing a clear description of the process, being transparent in the analysis, and taking

into account the consistency between the first and subsequent studies. Furthermore, re-testing or re-analysis by different researchers is necessary to ensure the trustworthiness of the interpretation.

#### **3.8** Research Framework

### **RESEARCH OBJECTIVE**

- · To know and understand the primary elements influencing customers' interest to use artificially intelligent household items.
- To identified and analyse the customers' interest in the artificial intelligence-powered household items are significantly important for the marketing strategies.
  To determine the customers' interest in the artificial intelligence-powered household items would help the company in presenting better marketing plan.



**Figure 3.1 Research Framework** 

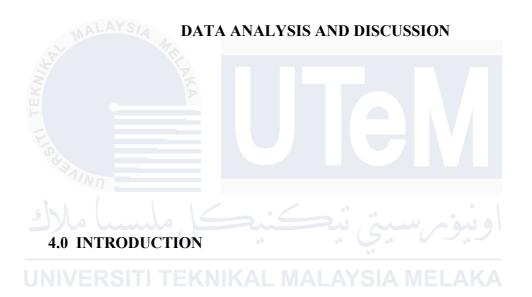
#### 3.9 Summary

Chapter 3 digs into the methodology, processes, procedures, and samples used to investigate customer interest in Artificial Intelligence (AI) home products for marketing objectives. The study's goal is to better understand research techniques from the viewpoints of both customers and experts, while also investigating emotional, economic, and technical variables. It describes study designs, methodological choices, main and secondary data sources, sample methods, and research methodologies, such as interviews and pilot testing. Furthermore, it emphasises the significance of validity and reliability in qualitative research, which provide correct interpretations and consistent data collection and analysis.



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#### **CHAPTER 4**



This chapter's results and discussion are designed to incorporate more discourse and interpretation of the issue under review. The results are intended to demonstrate significance or relevance based on the aims and scope of the researcher's study. The results are evaluated qualitatively. Data were obtained from a total of 6 persons who utilize household AI. Data was collected through in-person and online encounters with users.

Pictures were utilized to document the interview with the responder. All information obtained during the interview session is strictly confidential and will only be used for research purposes. This research investigates the usefulness of new technologies in society, whether they give significant benefits to the community or not. This chapter also includes respondents' profiles.

#### 4.1 BACKGROUND ABOUT ARTIFICIAL INTELLIGENCE

In recent years, artificial intelligence (AI) has emerged as a disruptive technology, impacting businesses and transforming daily life. From smart assistants to predictive analytics, AI capabilities extend beyond simple automation, allowing systems to learn, adapt, and make intelligent judgments. As society becomes more reliant on AI-powered solutions, their integration into the household environment has gained substantial attention.

AI-powered home systems seek to enhance quality of life by offering convenience, efficiency, and tailored services. These systems utilize complex algorithms, machine learning, and data analytics to improve home management, increase security, and provide customers with personalized experiences. AI applications in the home include smart thermostats, robotic vacuum cleaners, virtual assistants like Alexa or Google Home, and smart security systems.

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#### **4.2 DESCRIPTION OF RESPONDENT**

The demographic profile of respondents from Melaka who utilize AI-powered domestic systems within the region

No	Name Of Respondent	Use	Types Of	Work	Age
			Technolgy		
1		4 Years			
	Nur Mazwin Baharin		Google	Design	25
			Assistant	Engineer	

2	Bryan Lim	Less Than 1 Year	Samsung Smart Things	Student	23
3		T TT 157		T 1 1 1	20
	Amirul Haziq	Less Than 1Year	Airbot Robot Vacuum X40	Technical Engineer	29
			Ultra		
4	Nur Faisdaton	2 years	Alexa	Manager	51
5	Khairul Faizal	2 years	Alexa	Conty Director	50
6	Nuraqilah Safiah	2 Years	Smart Pet Auto Litter Box	Student	25

Figure 4.1: Description of respondent

### 4.2.1 Respondent A

Nur Mazwin Baharin, a 25-year-old Design Engineer from Mukim Belimbing in Alor Gajah, has used Google Assistant for the last four years. Her experience demonstrates how this technology has substantially increased her productivity by streamlining everyday duties and refining her creative workflow. She emphasizes the need of smart assistants in expediting difficult operations in the engineering and design domains.

#### 4.2.2 Respondent B

Bryan Lim, a 23-year-old student who lives in Merlimau, Jasin, has been using Samsung SmartThings for less than a year. This smart home automation system

enables him to monitor and operate a variety of linked gadgets in his house, highlighting the rising interest among young people in incorporating contemporary technology into daily life. His findings offer light on how smart home technologies might meet the convenience and efficiency requirements of a tech-savvy younger audience.

#### 4.2.3 Respondent C

Amirul Haziq, a 29-year-old Technical Engineer from Durian Tunggal, Alor Gajah, has less than a year of experience using the Airbot Robot Vacuum X40 Ultra. As part of his job, he integrates and manages smart cleaning equipment while emphasizing the professional uses of automation technology. Amirul's viewpoint exemplifies how smart tools may help solve real-world problems and increase productivity in both personal and professional settings.

#### 4.2.4 Respondent D

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Nur Faisdaton, a 51-year-old manager residing in Tasik Utama, Ayer Keroh, has used Alexa for two years. This voice-activated assistant helps her organize her daily chores and increase her productivity, which is especially important considering her hectic schedule. Her experience demonstrates the value of such technology in decreasing effort and conserving energy for busy professionals.

#### 4.2.5 Respondent E

Khairul Faizal, a 50-year-old County Director from Tasik Utama, Ayer Keroh, has used Alexa for two years. This technology helps him streamline his everyday operations and better manage his obligations. His example demonstrates how voice assistants may improve time management and overall productivity for high-level professionals who have demanding jobs.

#### 4.2.6 Respondent F

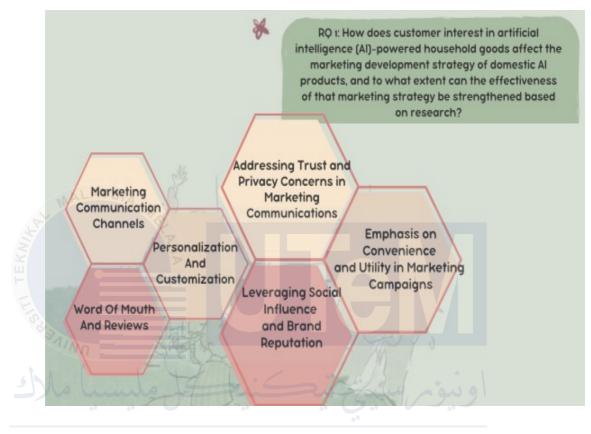
Nuraqilah Safiah, a 25-year-old student from Tasik Utama, Ayer Keroh, has been using a Smart Pet Auto Litter Box for the last two years. This technology allows her to balance her academic duties while also making pet care easier and more effective. Her example demonstrates how automation may help people with hectic schedules manage many jobs more easily, enabling convenience and improved time management.

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#### 4.3 Thematic Analysis

The thematic analysis revealed critical insights into the behavior, preferences, and challenges associated with AI domestic products. The findings are organized into six key themes: usage patterns, trust and privacy, social and cultural influences, marketing strategies, benefits, and challenges. Each theme is explored in detail below.

### 4.3.1 Usage of digital marketing techniques.



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FIGURE 4.2: Usage of digital marketing techniques.

Theme	Respondent	Quote	Code
Usefulness and Convenience	Respondent A	Google Assistant is useful, but there isn't much Google can do. To assist open the drapes, maybe the TV is OK, but if it's anything else, it's still not worth it.	Use
HALA MALA	Respondent C	The Airbot Robot Vacuum X40 Ultra comes in handy on a daily basis, especially while I am away from my family. I use this vacuum to save both time and energy.	Use
Trust and Privacy Concerns	Respondent B	I believe in Samsung Smart Things, but I don't enjoy utilizing them.	Believe
UNIVERS	Respondent F	You are not need to give personal information when using the smart pet automatic litter box. This product's functionality is solely dependent on sensors and WiFi.	Functionality
Social Influence and Brand Reputation	Respondent E	I also purchased it when a work acquaintance recommended it during a discussion about Amazon. As a result, I chose to acquire it, despite the fact that it was pricey at the time, costing RM500.	Recommended

	Respondent A	When I use the product, it makes me feel affluent.	Use
Marketing Communication Channels	Respondent A	I discovered the product on TikTok.	Product on media
ALAL MALAI	Respondent F	I came across the product on Shopee and TikTok, which both had engaging promotions.	Product on media
Personalization and Customization	Respondent C	The product adjusts to my daily cleaning schedule.	My daily
Word of Mouth and Reviews	Respondent D	I heard a lot from my office friends.	friends
UNIVERC	Respondent B	Friends recommended this product based on their experiences.	Friends

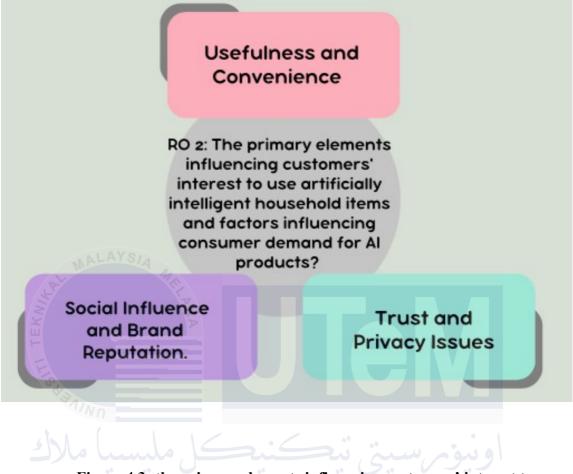


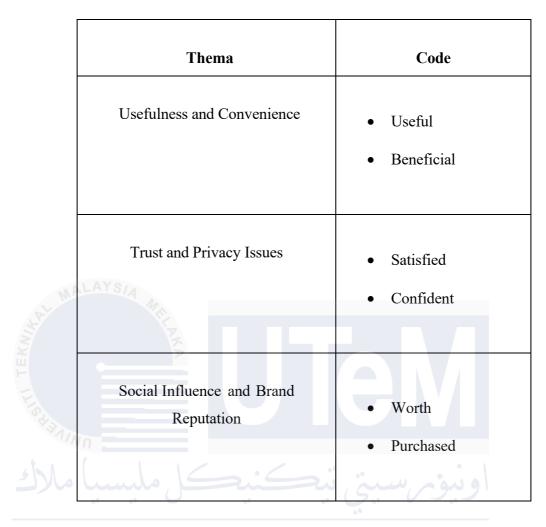
Figure 4.3: the primary elements influencing customers' interest to use artificially intelligent household items and factors influencing costomer demand for AI product

Thema	Respondent	Quote	Code
Usefulness and Convenience	Respondent A	Google Assistant is useful, but there isn't much Google can do. To assist open the drapes, maybe the TV is OK, but if it's anything else, it's still not worth it.	Useful

	Respondent F	Very handy. I enjoy having cats, but I dislike dealing with cat poo and such. As a result, utilizing the Smart Pet Auto Litter Box is really beneficial.	Beneficial
Trust and Privacy Issues	Respondent A	I'm quite satisfied with Google Assistant, therefore I'm using another Google device, Google Pixel 9.	Satisfied
EKWA	Respondent C	I am very confident in the Airbot Robot Vacuum X40 Ultra product since, in my 10 months of usage, it has never given me any issues.	Confident
Social Influence and Brand Reputation	Respondent C	When I was still pursuing an engineering degree, we frequently talked vacuum products utilizing AI. Is it worth having at home? Thank God, I made the correct decision.	Worth
UNIV	Respondent F	I purchased this based on social influence. Furthermore, I was quite busy at the time, leaving me with no time to care for the cat.	Purchased

Figure 4.4: Final table thematic analysis

	Theme	Code
	Usefulness and Convenience	Use
TEKNIA	Trust and Privacy Concerns	<ul><li>Believe</li><li>Functionality</li></ul>
	Social Influence and Brand Reputation	Recommended     Use
	Marketing Communication Channels	Product on media
	Personalization and Customization	My daily
	Word of Mouth and Reviews	Friends



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From the table formulated above it shows that, the data obtained was evaluated using thematic analysis techniques. The analysed data was collected according to the questions from the interviews. The data received is authentic and original data and it is collected from 4 respondents who have already been interviewed.

To raise client interest in AI-powered home products, an efficient digital marketing plan should be established, with an emphasis on customization and appropriate communication channels. For example, a research in the food and beverage industry in Melaka suggests that firms utilize social media marketing to better engage consumers with AI goods. Customer feedback and social influence may also help increase trust and visibility for AI businesses. Email platforms may also be used as a marketing tool to highlight

major AI product features such as energy efficiency and data protection. Understanding the specific demands of customers in target locations such as Melaka Tengah would not only raise awareness but also develop customer connections in the long run.

#### 4.4 Research Finding

The most common themes that arose during the research were connected to the study's aims and purposes. Because the ideas emerging from all six participants were very similar, replies were pooled to go deeper into this issue. The issues are presented chronologically in order to comply to the goal of conducting a longitudinal study, and they are supported with interview excerpts. The quotations chosen for consideration were picked expressly for the concerns they were intended to illustrate.

4.4.1The primary elements influencing customers' interest to use **UNIV** artificially intelligent household items and factors influencing consumer demand for AI products?

> Table below shows the themes that have been generated through question one in the first research objective.

No	Elements	Respondent	Respondent	Respondent	Respondent	Respondent	Respondent
		Α	В	С	D	Ε	F
1	Usefulness and Convenience	/	/	/	/	/	/

2	Trust and Privacy Concerns	/	/	/	/		/
3	Social Influence and Brand Reputation	AYSIA	/			/	/

Artificial intelligence (AI) is altering modern households by providing ease and efficiency through its usage in everyday chores. The research findings are based on four important themes: utility and convenience, affordability, trust and privacy issues, and social influence and brand reputation, as determined through in-depth interviews with six Melaka respondents. These topics offer light on the most important variables impacting consumer interest and adoption of AI-powered household systems.

#### 4.4.1.1 Usefulness and Convenience

The utility and ease of AI technology were identified as the most widely accepted factor among all respondents. Each participant agreed that AI has a major role in streamlining procedures and increasing efficiency. Respondent A, a 25-year-old Design Engineer named Nur Mazwin Baharin, stressed how Google Assistant has become vital in her working life. By automating boring chores and improving her workflow, technology has enabled her to concentrate on the creative and technical parts of her career. Similarly, Respondent B, Bryan Lim, a 23- year-old student, praised Samsung SmartThings' effectiveness in controlling his connected gadgets, which helped him arrange his house and manage his lifestyle.

Respondent C, Amirul Haziq, stated that the Airbot Robot Vacuum X40 Ultra decreased the time and effort necessary to maintain cleanliness at home, allowing him to focus more on his profession as a Technical Engineer. Respondent D, Nur Faisdaton, echoed this feeling, describing how Alexa has simplified her daily tasks, lessening the physical and mental strain of maintaining a hectic schedule as a manager. Alexa helped Respondent E, Khairul Faizal, handle his obligations as a County Director. Finally, Respondent F, Nuraqilah Safiah, enjoyed how the Smart Pet Auto Litter Box simplified pet care, allowing her to strike a balance between her academic and personal lives.

Below is what the respondents said about usefulness and convenience elements:

Respondent A said that: "Google Assistant is useful, but there isn't much Google can do. To assist open the drapes, maybe the TV is OK, but if it's anything else, it's still not worth it"

Respondent B said that: "Samsung Smart Things can aid you in everyday life if you're lazy yet prefer traditional techniques. For example, use voice commands to switch on the lights or fan. I feel more at ease utilizing my own hands and feet" Respondent C said that: "The Airbot Robot Vacuum X40 Ultra comes in handy on a daily basis, especially while I am away from my family. I use this vacuum to save both time and energy. I can work properly without worrying about cleaning the house after work. I believe this AI is very worth it"

Respondent D said that: "I believe Alexa is valuable, especially in old age. Especially when I'm sitting on the sofa but need to get up and stand to turn on the lights, TV, or other electrical devices. It's quite tiresome"

Respondent E said that: "Alexa is useful, but I don't much enjoy using it"

Respondent F said that: "Very handy. I enjoy having cats, but I dislike dealing with cat poo and such. As a result, utilizing the Smart Pet Auto Litter Box is beneficial, particularly when dealing with excrement. As a result, I do not have enough time to handle because I am now busy with my studies at UTEM"

# 4.4.1.2 Trust and Privacy Issues

Concerns about trust and privacy have emerged as another important element impacting AI technology adoption. Almost all respondents expressed concern about the data collecting and security standards of these services.

Respondent A, Nur Mazwin, expressed her initial skepticism about using Google Assistant owing to concerns about data usage. She gradually acquired confidence by studying the product's privacy settings and ensured that critical information was secured. Respondent B, Bryan Lim, expressed similar concerns, highlighting the need of manufacturers providing clarity about how user data is gathered, kept, and used. Respondents C and D saw privacy concerns as directly related to brand trust. Amirul Haziq, for example, stated that his decision to adopt Airbot Robot Vacuum was motivated by the company's reputation for strong security procedures. Similarly, Nur Faisdaton stated that Amazon's established trustworthiness played a role in her decision to use Alexa.

Interestingly, Respondents E and F were less concerned with privacy. Khairul Faizal and Nuraqilah Safiah both stated that, while they were aware of the possible hazards, they believed the convenience afforded by the technology surpassed their worries. This study implies that trust is frequently developed on a mix of personal experience, brand reputation, and perceived value, which influences the degree to which privacy concerns function as a barrier.

Below is what the respondents said about Trust and Privacy Issues elements:

Respondent A said that: "I'm quite satisfied with Google Assistant; therefore, I'm using another Google device, Google Pixel 9"

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Respondent B said that: "I believe in Samsung Smart Things, but I don't enjoy utilizing them"

Respondent C said that: "I am very confident in the Airbot Robot Vacuum X40 Ultra product since, in my 10 months of usage, it has never given me any issues and has helped me a lot as long as we change the filthy water with soapy water, keep the switch socket open, and connect the vacuum to WiFi"

Respondent D said that: "So far, it's well, Alhamdulillah"

Respondent F said that: "You are not needed to give personal information when using the smart pet automatic litter box. This product's functionality is solely dependent on sensors and WIFI"

#### 4.4.1.3 Social Influence and Brand Reputation.

Social influence and company reputation also have a big impact on customer choices for AI. Respondents B and F stressed the importance of peer recommendations in their decision-making processes. Bryan Lim remarked that he was exposed to Samsung SmartThings by a friend who praised its dependability, whilst Nuraqilah Safiah stated that her classmates' favorable experiences with comparable AI products affected her choice to buy a Smart Pet Auto Litter Box.

For Respondent A, C, and E, brand reputation was a critical aspect. Nur Mazwin stated that Google's long-standing reputation for innovation gave her confidence in using Google Assistant. Similarly, Amirul Haziq and Khairul Faizal stressed the importance of known companies in assuring product dependability and support, which influenced their selections to choose the AirBot Robot Vacuum and Alexa, respectively.

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Respondent D, Nur Faisdaton, offered a different viewpoint. While brand reputation was important, her choice of Alexa was mostly motivated by her personal desire for a dependable voice assistant, demonstrating that individual needs may occasionally trump external considerations.

Below is what the respondents said about Social Influence and Brand Reputation elements:

Respondent A said that: "When I use the product, it makes me feel affluent"

Respondent B said that: "People are becoming more evolved and wish to test smart homes since they appear to be quite useful. As a result, my mother wants to try, but so far it has not been satisfied, especially given the high cost"

Respondent C said that: "When I was still pursuing an engineering degree, we frequently talked vacuum products utilizing AI. Is it worth having at home? Thank God, I made the correct decision. sans social influence or brand, but from university days"

Respondent D said that: "I heard a lot from my office pals"

Respondent E said that: "I also purchased it when a work acquaintance recommended it during a discussion about Amazon. As a result, I chose to acquire it, even though it was pricey at the time, costing RM500"

Respondent F said that: "I purchased this based on social influence. Furthermore, I was quite busy at the time, leaving me with no time to care for the cat"

4.4.2 Customers' interest in artificial intelligence-powered household items and the effectiveness of domestic AI product marketing strategy.

No	Elements	Respondent	Respondent	Respondent	Respondent	Respondent	Respondent
		Α	В	С	D	Ε	F

1	Marketing Communication Channels	TikTok					Shopee/ TikTok
2	Personalization And Customization	Yes	Yes	Yes	Yes	Yes	Yes
3	Word Of Mouth And Reviews	مليسيا ه	Friends Review	) تيك سما مع	Friends Review	Friends Review	Friends Review

### 4.4.2.1 Marketing Communication Channels

One of the most important aspects impacting customer interest in AI-powered household goods is the choice of appropriate marketing communication channels. According to the survey results, respondents A, D, and F identified TikTok as a useful medium for learning about AI goods. TikTok's short-form video format is highly entertaining and ideal for showcasing product functioning in an easy-to-understand way. Demonstrations like a smart vacuum cleaning robot roaming a home, for example, may instantly attract the viewer's interest while also demonstrating the product's ease in real- life circumstances.

Respondent B, on the other hand, lists sites such as Shopee, showing a preference for online purchasing platforms that allow for direct engagement with the goods. Customers frequently visit e-commerce websites to read reviews, see product specs, and search for discounts. The availability of AI-powered home objects on well- known platforms increases client confidence and speeds up purchase choices. This research lends credence to the premise that marketing strategies must be omnichannel in order to accommodate customers' diverse tastes across several digital channels.

Below is what the respondents said about Marketing Communication Channels factors:

Responden A said that: I was influenced by Tiktok at the time. In 2020, the age of covid and tiktok hits has arrived. That is why I purchased it and have used it until now.

Respondent F said that: I was influenced by TikTok and looked up a lot of information about it, but I ended up buying an auto litter cat from Shoppee and having it delivered by truck.

#### 4.4.2.2 Personalization and Customization

Personalization has emerged as a key driver driving demand in AI-powered household items. All six research participants stressed the value of AI solutions that may be adapted to unique family needs. This desire derives from the fact that the key concern when acquiring such things is whether they would be convenient for the consumer. Respondents expressed a strong desire for items that make their everyday life easier, notably by minimizing the need for human labor in domestic or office chores. Domestic AI technology is intended to meet these objectives successfully.

Among those who utilize smart home gadgets, the integration of equipment like curtains, televisions, lighting, fans, and air conditioners via voice commands was emphasized. This technology saves users time by eliminating the need for manual operation of these devices. Furthermore, robot vacuums were recognized for their autonomous functioning, which required little maintenance, such as replenishing with clean water and soap once a month. When the battery is low, the vacuums automatically charge, saving even more time and energy. Similarly, automated pet care items, such as the self-spinning litter box, were praised for providing safety and cleanliness without requiring additional work

from the owner.

the owner.

AI's capacity to adapt to individual preferences generates a sense of ownership and control, which is critical for increasing consumer engagement. When marketing techniques highlight the customization aspect, they appeal to customers who want items that meet their individual demands and lifestyle. Personalization plays an important part in AI products since it improves the perceived value of the product, develops the customer's relationship with it, and, ultimately, promotes customer happiness and loyalty.

Below is what the respondents said about personalization and customization elements:

Responden A said that: I need to learn in a day how to utilize Google Assistant because I am used to utilizing my own energy.

Respondent B said that: I can adjust to Samsung Smart Things because I learnt to utilize my friends' before purchasing.

Respondent C said that: The vacuum is quite easy to use and has a wealth of information. Simple and easy to use without much learning and configuring.

Respondent D said that: We are older, thus we have less early exposure to technology. Furthermore, technology has advanced significantly.

I have to ask my children for assistance in connecting with other technology. And now I'm used to using that technology. Respondent E said that: I only need to provide instructions. However, the only language used is English.

Respondent F said that: Using the litter box is really straightforward. It only need wifi, a socket, and other necessities. Unlike previous systems, it does not need the user to manage the litter box.

### 4.4.2.3 Word of Mouth and Reviews

Word of mouth and reviews have an undeniable influence

on client purchase decisions. Respondents B, C, D, and E all stated that recommendations from friends or internet reviews are important. For example, Respondent B claimed that a trusted friend's evaluation affected their choice to acquire an AI-powered household product. This demonstrates the importance of peer influence in decision-making, particularly for items that demand a level of confidence, such as AI-powered gadgets, which may raise privacy and security issues.

Marketing techniques that stress favorable client feedback, whether from friends or through internet platforms, are more effective. Encouraging pleased consumers to share their experiences on social media, review sites, and e-commerce platforms may help a company gain credibility and authenticity. A strong word-of- mouth reputation is especially important for AIpowered goods because it builds trust in technology that could otherwise be perceived as daunting or difficult.

Below is what the respondents said about Word of Mouth and Reviews elements:

Respondent B said that: "My friend prefers Samsung Smart Things since he is a great admirer of Samsung users. Therefore, I got it only to illustrate why he enjoys using Samsung items"

Respondent D said that: "My office mate advised I get it because I have a minor knee problem. He informed me that Alexa can assist, especially when we're exhausted from work and can't stand to get up and sit down. My knee discomfort will be worse if I walk frequently. So my coworker recommended it"

Respondent E said that: "I purchased it because I was interested in discussing Amazon and received a recommendation from a

coworker to do so, particularly after my wife's leg had been treated. So I decided to acquire it to simplify my daily life"

Respondent F said that: "I also received a suggestion from a friend after complaining about the cat feces issue I was experiencing. That's why my friend recommended purchasing a litter box"

4.4.3 The customers' interest in artificial intelligence-powered household items lead to the implications of research on marketing strategy development.

No	Elements	Respondent	Respondent	Respondent	Respondent	Respondent	Respondent	
		A	В	С	D	E	F	
1	Emphasis on Convenience and Utility in Marketing Campaigns			/ /			/	
2	Addressing Trust and Privacy Concerns in Marketing Communications	/	/	/	/	/	/	

3	Leveraging Social Influence	/	/	/	/	/	/
	and Brand Reputation						

## 4.4.1.1 Emphasis on Convenience and Utility in S Marketing Campaigns.

Customers' interest in AI-powered household items is heavily influenced by convenience and utility, according to respondents. The replies in the table show that Respondents A and C agree on the importance of this factor.

# For example, Respondent A, a design engineer, underlined

how Google Assistant boosts productivity by automating regular chores, allowing her to focus on more difficult areas of her job. Similarly, Respondent C, a technical engineer, described how the Airbot Robot Vacuum drastically decreased cleaning time, allowing her to focus on professional tasks. This highlights the value of AI technology in simplifying daily living and increasing overall efficiency.

Implications: Marketers should design ads that highlight the practical benefits and real-world uses of AI technologies. Campaigns may feature testimonials or case studies demonstrating how these products assist consumers with normal activities such as cleaning, organizing, or monitoring home security. Visual material, particularly on platforms such as TikTok, may successfully communicate the possibilities of AI technologies in an accessible and engaging manner.

Because AI for home usage is still relatively new, many consumers, such as Respondents D and E, who are older and unfamiliar with the technology, may lack product knowledge. As a result, marketing communications should focus promoting characteristics that save time and increase productivity. These elements are particularly appealing to customers looking to optimize their daily routines and achieve a better work-life balance.

# Below is what the respondents said about Emphasis on

Convenience and Utility in Marketing Campaigns elements:

Respondent C said that: "Vacuum has so many ads that everyone is now familiar with the auto vacuum. Use at home is solely determined by whether or not it is available for purchase. Furthermore, vacuums and mops are increasingly being marketed at electronics stores"

Respondent F said that: "Marketing and campaigns against litter boxes, particularly on TikTok, are quite common"

# 4.4.1.2 Addressing Trust and Privacy Concerns in Marketing Communications

All respondents (A, B, C, D, E, and F) agreed that concerns of trust and privacy had a substantial influence on the adoption of AI-powered home devices. Despite the benefits of new technologies, questions regarding how personal data is collected and used were frequently expressed. Respondents A, B, and D explicitly raised these concerns, highlighting the necessity of data security.

AI systems frequently rely on personally identifiable information, such as voice recordings, browser history, or location data, making it critical for businesses to address privacy issues. Ensuring that users trust businesses to manage their data appropriately is critical to increasing the adoption of such goods.

Implications: Marketers should stress openness and integrity in their communications. It is critical to give clear, accessible information on the data protection mechanisms built into AIpowered devices. Collaborating with known third-party organizations or receiving certification from respected security authorities can help to certify a product's safety. Highlighting these qualifications or connections in marketing materials can boost customer trust and encourage product uptake. Below is what the respondents said about Addressing Trust and Privacy Concerns in Marketing Communications elements:

Respondent A said that: "I trust Google, no debate"

Respondent B said that: "Samsung is a big company so I believe, if Samsung cannot be trusted especially regarding privacy. I am sure Samsung will not have progressed to this point"

Respondent C said that: "I believe because there is no need to include any excessive information in this technology"

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Respondent D said that: "So far I am okay with Alexa" Respondent E said that: "It is okay"

Respondent F said that: "I believe".

# 4.4.1.3 Leveraging Social Influence and Brand Reputation

Social impact and brand reputation are crucial factors in customer purchase choices, especially for AI-powered household items. Several respondents, notably B and F, stated that peer recommendations influenced their decision to employ AI solutions. Respondent B, a student, stated that his choice to buy Samsung SmartThings was greatly influenced by a friend's favorable experience with the device. Similarly, Respondent F stated how a classmate's advice influenced his decision to purchase a Smart Pet Auto Litter Box.

In addition to peer influence, brand reputation is quite important. Respondents A, C, and E answered that they prefer to utilize AI solutions from well-known and trustworthy organizations with a track record of creating innovative and dependable goods. Respondent A emphasizes Google's reputation for technical innovation, whereas Respondent C prioritizes Airbot's safety features when purchasing a robot vacuum.

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Marketers could employ social influence to promote usergenerated material, such as product evaluations, testimonials, and social media postings, in order to generate awareness around AI-powered goods. Encouraging consumers to share their positive experiences can help to increase trust and product awareness. In addition, influencer marketing is an effective strategy for reaching out to potential clients. Companies that collaborate with well-known influencers or reputable industry professionals can boost their reputation and persuade a larger audience to consider adopting AI solutions. Brand reputation is an important factor in establishing consumer trust and loyalty. Companies must spend in building a solid reputation for quality, customer service, and innovation. This may be accomplished by consistent messaging, excellent customer encounters, and a dedication to providing high-quality items that satisfy consumer expectations. Marketing efforts should showcase the company's history, commitment to innovation, and great customer experiences.

Below is what the respondents said about Leveraging Social Influence and Brand Reputation elements:

Respondent A said that: "Because google is a big company that releases products, so I bought them. compared to other brands"

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Respondent B said that: "Using influence on social media to market Samsung smart home throughout the country. if I buy it, even on Samsung's own website"

Respondent C said that: "I bought it because many people suggested getting this product because it is popular among vacuum cleaners. The product is popular everywhere, whether it is TikTok, Lazada, Shoppe, even at my own university when I was studying" Respondent D said that: "Only because of amazon" Respondent E said that: "Because of amazon's products" Respondent F said that: "Popular on social media"



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### **CHAPTER 5**



### 5.0 INTRODUCTION

Based on the findings, the ultimate conclusion and recommendation were addressed. In this chapter, we will review the results from Chapter 4. The study question and aim will be addressed in this chapter. This chapter discusses the study's findings, limitations, and recommendations for future studies based on the results.

### 5.1 Conclusion

In this section, researcher was discussed the findings from previous chapter and attempted to accomplish the three main research objectives that have been discussed previously. Hence, research objectives were achieved based on the results from the themes that have been formed for all objective. First, To know and understand the main elements that influence customer interest in using artificial smart home products. Second, To identify and analyze customer interest in artificial intelligence-powered household products is very important for marketing strategies. It followed by To determine customer interest in artificial intelligence- powered household products will help the company in presenting a better marketing plan. At last, from the analysis, this research study has fulfilled the research objectives.

5.1.1 RQ 1: How does customer interest in artificial intelligence (AI)powered household goods affect the marketing development strategy of domestic AI products, and to what extent can the effectiveness of that marketing strategy be strengthened based on research?

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Customer interest in AI-powered household items influences marketing development methods for domestic AI products. This study's findings show that customer adoption of AI home gadgets is largely motivated by three factors: utility and convenience, trust and privacy concerns, and social effect and brand reputation. Understanding and applying these factors into marketing strategies may help organizations attract and keep clients.

### Utility and Convenience as Marketing Priorities

Customer interest is mostly influenced by the perceived value and convenience of AI-powered household devices. Respondents stressed how AI

gadgets make daily chores easier, more efficient, and free up time for other important activities. Products such as Google Assistant, Amazon Alexa, and AI-enabled robotic vacuums have been hailed for automating mundane tasks and making life easier. Marketing strategies should prioritize expressing these real-world advantages through narrative and visual demonstrations, particularly through digital platforms like TikTok and Shopee, which have been highlighted as important marketing communication channels.

Businesses may utilize social media channels to highlight product features in relevant circumstances, emphasizing time savings, simplicity of use, and integration with current home routines. Furthermore, integrating user testimonials and case studies into advertising content helps highlight the practical benefits of AI-powered home gadgets, making them more enticing to potential purchasers. Amazon Alexa and Apple Siri are the two Voice Assistant used for conducting experiments in this case. While the individuals appreciated the services offered by these devices, understanding the responses and controlling the presented information were some points which further need improvement. Soram Kim (2020). Pets will be able to enjoy a clean litter box because this Smart Pet's Litter.Box is ideal for pets. It gives a sense of peace and comfort. Keeping the litter box clean helps control odor. As a result, Smart Pet's Litter Box have advantages over conventional litter boxes after each use. Prevent pets that like to dispose of faeces evenly as it can stain the house. Among the reasons why pets make it probably because the litter box is dirty and they are not comfortable throwing faeces there. Politeknik (2022).

Trust and Privacy in Marketing Consumers expressed substantial worries about trust and privacy, which influenced their readiness to use AI-powered gadgets. Customers are becoming more aware of the data security dangers connected with AI technology, namely how personal data is gathered, kept, and used. This mistrust emphasizes the importance of organizations addressing these issues proactively in their marketing tactics. Marketing efforts should emphasize transparent data protection rules, privacy measures, and security certifications from credible businesses. Companies that explicitly demonstrate their commitment to protecting customer data via encryption, anonymization, and strong security standards are more likely to gain consumer trust. Furthermore, collaborating with reputable businesses like Google, Amazon, and Samsung, who already have a good reputation for security and dependability, might help comfort potential purchasers. Social Influence and Brand Reputation in Marketing Strategies. They operate irrespective of the voice of the user and it is greatly useful in Automation system in offices. By simply connecting to a Wi-Fi network whose name can be configured in the ALEXA cloud server, automation of appliance becomes easier. S somesh (2020). The results of the study include the design and implementation of a vacuum cleaner robot that can be controlled remotely using a smartphone application and navigate a room using navigation algorithms. S somesh (2020).

Peer referrals and brand reputation play critical roles in consumer decisionmaking. The study discovered that reviews, word-of-mouth endorsements, and well-known company reputations all had a substantial impact on responders. Platforms such as TikTok, Shopee, and influencer marketing campaigns provide organizations with great opportunity to efficiently use social influence.

Marketers should encourage pleased consumers to share their experiences online, resulting in organic promotional material that appeals to new purchasers. In addition, collaborating with influencers and industry experts may boost brand credibility and product visibility. Businesses may increase the demand for their AI-powered household products by emphasizing customer happiness and using favorable evaluations. 5.1.2 RQ 2: The customers' interest in artificial intelligence-powered household items lead to the implications of research on marketing strategy development.

Customer interest in AI-powered household items has long-term ramifications for marketing strategy development, in addition to early adoption. To maximize marketing success, businesses must incorporate the following approaches:

# 5.1.2.1 The Omnichannel Marketing Approach

Given that respondents chose TikTok and Shopee as the key discovery channels for AI home gadgets, firms should implement an omnichannel marketing plan that includes social media interaction, ecommerce integration, and traditional advertising. This method guarantees that marketing messages reach a wide range of client groups across numerous channels, increasing exposure and engagement.

# 5.1.2.2 Personalization and customization.

Customization is critical to increasing customer interest in AIpowered household products. Respondents preferred AI solutions that respond to their own demands, such as tailored voice commands, schedule automation, and smart home connections. Respondents preferred AI solutions that respond to their own demands, such as tailored voice commands, schedule automation, and smart home connections. Marketing efforts should stress AI products' capacity to respond to individual user preferences, illustrating how these technologies may boost personal productivity and ease.

### 5.1.2.3 Using Customer Testimonials and Reviews

Word of mouth is an effective marketing technique. Allowing consumers to submit reviews and share their experiences on social media may have a major impact on future purchasers. Businesses should aggressively gather and distribute positive testimonials via their marketing platforms, leveraging real-life success stories to foster trust and credibility.

### 5.1.2.4 Addressing Trust and Privacy Concerns

To alleviate privacy concerns, businesses should give transparent and easily available information about their security procedures. Transparency in data handling policies, combined with industry certifications and relationships with respected businesses, may boost customer confidence. To reassure customers, marketing materials should focus on privacy settings, opt-in options, and data protection rules.

### 5.1.2.5 Using Influencer and Peer Recommendations

Given the importance of social proof, marketers could ask influencers and industry experts to support AI-powered home items. Authentic recommendations from credible sources can increase customer confidence and adoption rates. Furthermore, marketers should promote organic debates and user-generated content to broaden their marketing reach.

### 5.2 future recommendation

### **5.2.1 Enhance Consumer Education Programs**

Enhancing consumer education programs is a critical technique for increasing user awareness and comprehension of AI-powered household items. Creating interactive marketing like as seminars, video tutorials, and live demonstrations may successfully highlight the goods' advantages and practical uses. Businesses may make AI technology more accessible, especially to non-technical people, by reducing technical jargon and presenting information in an easily consumable style. These initiatives not only boost customer confidence, but also provide future users the ability to make educated judgments.

### 5.2.2 Leverage Social Influence

Using social influence is another effective way to promote AIpowered products. Integrating social evidence such as peer evaluations, influencer endorsements, and customer testimonials may greatly increase credibility and trust. Businesses should concentrate on identifying important influencers in their target market and working with them to emphasize the real-world advantages and simplicity of use of these goods. This method promotes authenticity and relatability, making technology more enticing and accessible to a larger audience.

### References

Shixuan Cai, Xuesong Li (2021). Emotional Product Design for Smart Cat Litter BoxConsideringHuman-Computerhttps://ieeexplore.ieee.org/abstract/document/9647214

Lihao Wang (2021). Household smart cat litter box https://iopscience.iop.org/article/10.1088/1742-6596/1750/1/012008/pdf

Seema Singh, Deepa Ahuja, Prince (2023). An Extensive Review of the Advertising Appeals and their Impact on Consumer Behavior. ResearchGate https://www.researchgate.net/publication/371378546 An Extensive Review of the Advertising Appeals and their Impact on Consumer Behavior

### JNIVERSITI TEKNIKAL MALAYSIA MELAKA

Rodrigo p.v, Valtteri k, Cristiana R.l, Niloofar B.R, Jaakko M (2021). Customerorientation in the digital age: A conceptual framework and future research directions.JournalofBusinessResearch,https://www.sciencedirect.com/science/article/pii/S0148296320307463?via%3Dihub

Krishnan, C., Gupta, A., Gupta, A., & Singh, G. (2022). Impact of artificial intelligence-based chatbots on customer engagement and business growth. In T.-P. Hong, L. Serrano-Estrada, A. Saxena, & A. Biswas (Eds.), Deep learning for social media data analytics. Springer. <u>https://link.springer.com/chapter/10.1007/978-3-031-10869-3\_11</u>

Mekhanikov, A. (2022). Artificial Intelligence in marketing theory and marketing practice.

https://www.theseus.fi/bitstream/handle/10024/782985/Mekhanikov\_Andrei.pdf?seq uence=2&isAllowed=y

Marcello M.M, Rodrigo P.V, Jochen W (2021). AI in marketing, consumer research and psychology: A systematic literature review and research agenda, <u>https://onlinelibrary.wiley.com/doi/full/10.1002/mar.21619</u>

Graeme M, Kofi O.F (2019). Hey Alexa ... examine the variables influencing the use of artificial intelligent in-home voice assistants https://www.sciencedirect.com/science/article/abs/pii/S0747563219301840

Yogesh K. D, Thomas H. D, Niki P (2024). Generative artificial intelligence in marketing: Applications, opportunities, challenges, and research agenda. https://www.sciencedirect.com/science/article/abs/pii/S026840122300097X

Verma, M. (2022). Studying the relationship between artificial intelligence and digital advertising in marketing strategy. ResearchGate. https://www.researchgate.net/profile/Manish-Verma-7/publication/371686837\_STUDYING\_THE\_RELATIONSHIP\_BETWEEN\_ARTI FICIAL\_INTELLIGENCE\_AND\_DIGITAL\_ADVERTISING\_IN\_MARKETING\_ STRATEGY/links/64902dcd95bbbe0c6ed972ec/STUDYING-THE-RELATIONSHIP-BETWEEN-ARTIFICIAL-INTELLIGENCE-AND-DIGITAL-ADVERTISING-IN-MARKETING-STRATEGY.pdf Li, H. (2023). Artificial Intelligence (AI) Advertising https://www.researchgate.net/profile/Hairong-Li-2/publication/378872241\_Artificial\_Intelligence\_AI\_Advertising/links/65efb73f9ab 2af0ef8b07b05/Artificial-Intelligence-AI-Advertising.pdf

Guerreiro J, Sandra Maria C.L, Carolina R (2022). Advertising acceptance via smart speakers, <u>https://www.emerald.com/insight/content/doi/10.1108/SJME-02-2022-0028/full/html</u>

Abid H. Mohd J (2022). Artificial intelligence (AI) applications for marketing: Aliterature-basedstudy.

https://www.sciencedirect.com/science/article/pii/S2666603022000136

Dhruv G, John H, Elena K (2020). The future of technology and marketing: a multidisciplinary perspective, <u>https://link.springer.com/article/10.1007/s11747-019-00711-4</u>

Anil Eren, Hatice Dogan (2022) Design and implementation of a cost effective vacuum cleaner robot . Retrieved from <u>https://dergipark.org.tr/en/download/article-file/1411730</u>

Alin Tatu (2021). Article on advanced sensing technologies <u>https://www.mdpi.com/1424-8220/21/3/734</u>

S somesh (2020). IOP Conference Series: Materials Science and Engineering. https://iopscience.iop.org/article/10.1088/1757-899X/937/1/012008/pdf

Charnia iradat Rapa (2021). Journal of Physics: Conference Series https://iopscience.iop.org/article/10.1088/1742-6596/2394/1/012024/pdf

Soram kim (2020). Electronics Smart Home Forensics data Analysis of IoT Devices https://www.mdpi.com/2079-9292/9/8/1215#

Politeknik(2022)SmartPet'sLitterBoxFinalReporthttp://repository.psa.edu.my/bitstream/123456789/3570/1/Smart%20Pet's%20Litter%20Box-Laporan%20Akhir.pdf

# UNIVERSITI TEKNIKAL MALAYSIA MELAKA

### APPENDIX



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

Dear,

I am Nur Haslamatul Akma binti Ibrahim, a final-year student pursuing a bachelor's degree in Technopreneurshipat the Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka (UTeM). Under the supervision of Dr. Norun Najjah binti Ahmat, I am conducting qualitative research for my final-year project titled Customer Interest in Artificial Intelligent Domestic Products for Marketing Purposes."

I have conducted preliminary research on your business and identified that your company integrates artificial intelligence (AI) into its marketing strategy. As my study focuses on AI adoption in marketing, I am highly interested in learning from your experience and insights. Based on this, I would like to invite you to participate in an interview session as part of my research.

The interview will take approximately 30 minutes at a time convenient for you. Your valuable insights will serve as primary data for my academic research and will be kept strictly confidential.

If you agree to participate or have any questions regarding this interview, please reply to this email at *B062110394@student.utem.edu.my*.

I truly appreciate your time and consideration in contributing to my study. Looking forward to your positive response.

### **APPENDIX: INTERVIEW PROTOCOL INFORMATION SHEET**

#### **In-depth Interviews**

### Introduction

My name is Nur Haslamatul Akma Binti Ibrahim, and I am currently conducting a research study on customer interest in artificial intelligence (AI) domestic products for marketing purposes. This study aims to explore the various factors influencing consumer adoption of AI technology in household products.

### Purpose of the Study

This study seeks to understand how AI-powered household products influence consumer behavior and decision-making. Additionally, the study aims to identify the factors affecting AI adoption, including awareness, trust, security concerns, and economic considerations.

# Participation Details

If you choose to participate, I will ask you semi-structured questions related to your knowledge, experience, and perceptions of AI-powered household products. Topics will include AI usage, its impact on daily life, and challenges associated with AI adoption. Interviews will be recorded with your permission for data accuracy. All collected data will be kept confidential.

### Duration of the Study

The interview session will last approximately 30 minutes. The session will conclude once all relevant data has been obtained.

### Voluntary Participation

Participation in this study is completely voluntary. You may withdraw at any time without any consequences.

### Confidentiality and Risks

Your participation does not pose any risk to your privacy. Personal information such as names and other identifying details will not be included in the study. The study is conducted ethically, ensuring that no sensitive or controversial issues arise.

### Costs and Benefits

There are no costs associated with participation, nor are there direct financial benefits. However, your contributions will help researchers gain insights into consumer behavior and AI product adoption.

### Contact Information

For further inquiries, you may contact me at b062110394.student.utem.edu.my

### Consent to Participate

You have the right to decline or accept participation in this study. If you wish to continue, an interview session will be scheduled.

# UNIVERSITI TEKNIKAL MALAYSIA MELAKA

### **CONSENT FORM**

Study Title: "Customer Interest in Artificial Intelligence Domestic Products for Marketing Purposes"

**Principal Researcher:** Nur Haslamatul Akma Binti Ibrahim (B062110394), Universiti Teknikal Malaysia Melaka (UTeM)

- I have been given an explanation about this study in a language I understand.
- I have had the opportunity to ask questions, and all my inquiries have been answered satisfactorily.
- I understand that my participation is voluntary and that I may withdraw at any time without consequences.
- I understand that my responses will be kept confidential and used solely for research purposes.
- I agree that my responses may be used anonymously in research findings.

I agree to participate in this study:	
NIVERSITI TEKNIKAL MAI	
Participant Signature:	Date:

Researcher Signature:	Date:	
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### **INTERVIEW GUIDELINES**

### **General Questions & Background Information**

- 1. Can you tell me a little about yourself?
- 2. Can you describe your occupation and role?
- 3. How long have you been using AI-powered household products?
- 4. What is your age group?

Under 25 years

- 25-35 years
- o 35-45 years
- Over 45 years

Domain Knowledge About AI Domestic Products

1. Are you familiar with AI-powered household products?

- 2. Can you explain what you understand about AI-powered home devices?
  - 3. How frequently do you use AI domestic products in your daily life?

### Adoption of AI Domestic Products

- 4. What type of AI-powered household products do you use? (Smart speakers, smart lighting, robotic vacuum cleaners, etc.)
- 5. What type of AI-powered product do you use most frequently? Why?
- 6. What type of AI-powered product do you use least? Why?

7. Do you feel AI technology enhances your household management?

### Effects of AI Domestic Products

- 8. What impact have AI-powered products had on your daily life?
- 9. How strongly has AI technology influenced your household efficiency and decision- making?

### Benefits and Challenges

- 10. What benefits have AI-powered household products provided for you?
- 11. What challenges have you faced in adopting AI technology at home?

Importance of AI in Domestic Use

12. Do you believe AI-powered household products are essential for modern living?

13. Is AI technology becoming the primary household management tool for you?

### Closing Questions

- 14. Is there anything else you would like to share about your experience with AI-powered household products?
- 15. Thank you for your participation.

### **PARTICIPANT INTERVIEW QUESTIONS**

Interview Focus: Consumer Interest in AI Domestic Products for Marketing Purposes Questions:

- 1. Are you familiar with AI-powered household products?
- 2. Can you elaborate on your understanding of AI-powered domestic technology?
- 3. Do you use AI-powered household products? If yes, which ones?
- 4. What AI-powered product do you use most often? Why?
- 5. What AI-powered product do you use least? Why?
- 6. Do you think AI-powered products have improved your household experience?
- 7. What impact has AI-powered technology had on your daily routine?
- 8. How has AI technology influenced household decision-making?
- 9. What benefits have you experienced from using AI-powered products?
- 10. What challenges have you encountered in using AI-powered household products?
- 11. Do you think AI-powered household products are essential for future living?
- 12. Is there anything else you would like to share regarding AIpowered domestic technology?

## GANTT CHART 1<sup>ST</sup> SEMESTER

	Task/Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Finding the research tittle														
	Develop and confirm research title														
	Data Collection														
	Writing on chapter 1	14													
	Writing on chapter 2		LAKA												
	Writing on chapter 3														
150	Semester break														
5	Submission draft research report	م	بل		R.	• 4		2.			ىد	Ż			
Ν	Edit for final research report	T	EK	NII	KA	LI	ЛА	LA	YS	A	ME		KA		
	Submission final draft report PSM I														
	Preparation for seminar I														
	Seminar I														
	Submission PSM 1														

# GANTT CHART 2<sup>ND</sup> SEMESTER

Task/Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Briefing PSM 2														
Design Questionnaire														
Pilot Test														
Data Collection	MIT													
Data Collection Analysis		N A												
Preparation for Chapter 4														
Correction and Complete Chapter 4		2		• 2										
Preparation for Chapter 5	TE	KN	KA		AL	AY:	S. SIA	ME	LAK	A				
Correction and Complete Chapter 5														
Compiling														
PSM 2 Presentation														
Report Submission														