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How Product Knowledge Shapes the Impact of Artificial Intelligence on Spotify Brand Relationship and Loyalty

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ABSTRACT

Objective – The main focus of this research is to find out whether the use of Artificial Intelligence has an effect on Spotify's Customer Brand Relationship and Customer Loyalty, on the other hand it is also mediated by Product Knowledge.
Methodology – This research uses quantitative methods which are distributed through questionnaires and processed using SmartPLS. Respondent requirements include (1) Spotify users, (2) aged 12 – 45 years, and (3) domiciled on the island of Java. The data analysis process involves validity testing which is considered relevant if the value is more than 0.5 (> 0.5), reliability testing which is considered relevant if the value is more than 0.7 (> 0.7), and hypothesis testing which is considered significant if it has value more than 1.96 (> 1.96).
Findings – From a total of 195 respondents, the research results explain that the Artificial Intelligence variable influences Spotify's Customer Brand Relationship and Customer Loyalty, which shows a positive and significant influence. Similar results were also obtained if mediation from Product Knowledge was added.
Novelty – Examining the impact of Artificial Intelligence specifically within the context of Spotify and its users is a relatively focused area. While AI is increasingly prevalent, research delving into its direct influence on customer brand relationships and loyalty for a specific digital service like Spotify might offer unique insights.
Keywords: *artificial intelligence, customer brand relationship, customer loyalty, product knowledge*

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I. INTRODUCTION

In this era of digital transformation, humans are required to carry out fast-paced activities which result in increased stress. Based on Natalia's research in Nugraha (2019), music can reduce stress and depression because it affects the mind, feelings, and personality of humans (Linneman et al., 2019). Therefore, listening to music can be one of the most effective ways to calm emotions. Music invades brain performance, where a series of notes heard can form small structures that can trigger memory and creativity (Al Fajar, 2022).

The emergence of digital music services makes it easier for us to access various music genres quickly and easily. The results of a survey conducted by the Indonesian Internet Service Providers Association (APJII) stated that Spotify is the second most popular music platform in Indonesia in 2023 (Naurah, 2023). However, seen from the international realm, Spotify is the most popular global audio streaming service with 271 million users in 79 markets (Fadryona, 2020). Active Spotify users recorded in the AdWeek infographic are millennials and Z generations, reaching 72%. With the large number of Spotify users, it indirectly creates a trend in the world of music. Users can create playlists and add their favorite songs according to theme or genre. The playlists created are stored in "your collection."

Each user's playlist generates data recorded by the system. Artificial Intelligence (AI) plays an important role in forming decisions based on patterns in the data (Sahnir et al., 2023). Rasyid (2024) reported that there were more than 24 billion visits to the 50 most popular AI services with an average increase of 236.3 million visits per month. Indonesia is ranked 3rd (three) as the country with the most AI applications in the world, contributing around 1.4 million visits per month. By utilizing Artificial Intelligence, Spotify is able to move the market and create new behavioral patterns for users (Broberg et al., 2019). Spotify employs AI to analyze user data and forecast potentially appealing songs. This same AI powers the smart shuffle feature, which strategically adds related but unlisted tracks into your playlists, offering a personalized and dynamic listening experience beyond the original selection. Surprisingly, the AI foundation of this smart shuffle often goes unnoticed by users.

This study aims to analyze the impact of Artificial Intelligence in the music world on the relationship between users and brands with a focus on the research subjects of the millennial generation and generation Z. The millennial generation is the generation born from 1981 to 1996, while generation Z is the generation born from 1997 to 2010. Therefore, these two generations have a closer relationship with technology, especially Artificial Intelligence. It is hoped that this research can increase insight and provide benefits for further research.

II. LITERATURE REVIEW

Customer Brand Relationship

The concept of customer-brand relationship was first introduced in Shimp and Madden's paper (1988). They defined customers as forming relationships with brands. However, the study only focused on customers. Then in 1998, Fournier explained that Customer Brand Relationship is an emotional bond resulting from the interaction between a brand and its customers. Fournier's (1998) theory is widely accepted because it focuses on 2 things, namely brand and customer. He stated that "brands can be active partners of consumers and provide psycho-socio-cultural meaning". In his explanation, Fournier (1998) emphasized that the quality of the relationship depends on the reciprocity of customers and brands. There are six dimensions of customer and brand relationships including brand love, customer connection to the brand, closeness to the brand, commitment, people around the customer, and brand partner relationships. From these six dimensions, a sense of trust arises that can bring loyalty (Hasmini et al., 2016).

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Artificial Intelligence

The ever-evolving technology creates many changes. Artificial Intelligence is one of the innovations that is widely discussed. AI is modeled as a machine and programmed to resemble humans. By combining and managing a large amount of stored data quickly, AI allows software to learn patterns automatically. The concept of AI was initiated by a British mathematician named Alan Turing. He conducted a test (Turing Test) involving humans as questioners and two objects (humans and computers) as answerers. The purpose of the test was to study whether the machine could be said to be intelligent if the questioner was able or not to distinguish the answers from the two answering objects (Artificial Intelligence and Work Effectiveness, 2016). In the 1950s, a group of artificial intelligence scientists at the Massachusetts Institute of Technology (MIT) returned to researching AI. McCarthy—one of the MIT scientists—held the first conference that was considered a milestone in AI's fame. He said that his group agreed to build computer programs that were able to 'learn' and 'think' like humans. In 1966, a computer scientist named ELIZA created an interactive computer program that could converse with humans. In 1972, the SHAKEY program—the first mobile robot—was created by SRI International. Both programs worked on AI modeling. Unfortunately, the potential of AI was doubted in the 1980s because many AI projects failed due to technical errors and lack of funding. This 'AI winter' period reduced public interest and support for the technology. However, AI was again highlighted in the 1990s, where several companies began using AI to solve more complex problems. Until now, life in the industrial revolution 4.0 era is almost completely integrated with the internet, so that the use of AI is closely related to human life.

Customer Loyalty

One of the important goals of marketing is to have loyal customers (Risnaldi et al., 2023). According to Pohan and Aulia (2019), customer loyalty is a commitment held tightly by customers to buy or prioritize a product in the form of goods or services consistently. Referring to Zahara (2020), customer loyalty is a customer's commitment to repurchase a particular product or service in the future, even if the circumstances and marketing efforts of competitors have the potential to make customers switch to other companies. Kotler (2003) explains that customer loyalty means: Making repeat purchases, Telling or recommending the company to others, Not being interested in advertisements for other products, and Buying other products from the same company. Tabaku and Zerellari (2015) state that there are two types of customer approaches, namely the behavioral approach and the attitudinal approach. The behavioral approach refers to consistent and ongoing purchases from the same company. While the attitude approach is the result of a psychological relationship with goods or services, including commitment and positive attitudes.

Product Knowledge

Products are the main element in a business. Companies will not be able to carry out the marketing process without products and customer needs cannot be met. Conceptually, product recognition is important for customers and is influenced by the collection of information from marketers (Siagian et al., 2020). Product recognition is the entire scope of accurate information in consumer memory, which information can later be used as a consideration in determining further actions (Ridwan et al., 2018). Product knowledge is various types of knowledge, meanings, and beliefs recorded in customer memory (Siagian et al., 2020). There are three views of product knowledge, namely subjective and objective. Subjective knowledge is defined as the level of customer understanding of a product, objective knowledge shows how much information related to the product is remembered by the customer, and experiential knowledge refers to how long or how much experience a person has using the product. Based on the writing of Wang & Hazen (2016), customers with a high level of product knowledge will evaluate a product based on its quality

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because they believe in their own knowledge. In product knowledge, it includes knowledge of product benefits, knowledge of product characteristics and specifications, and knowledge of product satisfaction.

Research Paradigm

The framework used in this study can be seen in Figure 1. In the figure, the blue dotted line explains the influence of Product Knowledge about Spotify AI on Customer Brand Relationship. While the red dotted line explains the influence of Product Knowledge about Spotify AI on Customer Loyalty.

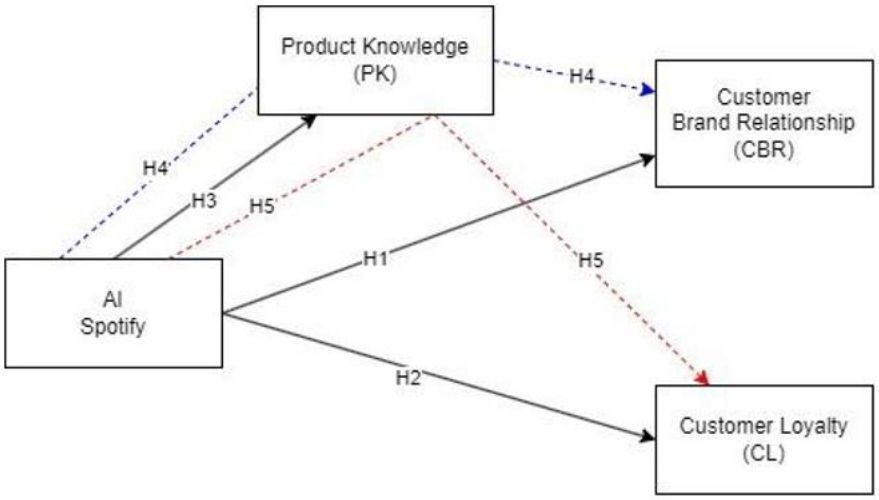

Figure 1 Proposed Conceptual Model

Hypothesis Development

Artificial Intelligence allows companies to analyze customer data, including their preferences, behaviors, and needs. Through the data that has been collected, AI can adjust content according to the behavior of each customer. A better understanding of customers gives companies the opportunity to adjust their offering strategies, thereby improving brand relationships with customers. In line with research by Cheng and Jiang (2021), it is stated that AI has a significant influence that indirectly affects the quality of customer relationships and responses to brands. A good experience motivates customers to have more "psycho-socio-cultural" emotional involvement with the company (Caru & Cova, 2003) which is in line with Fournier's Theory. The quality of AI can affect the relationship between customers and brands through accurate and up-to-date information and reliable, timely, and flexible services (McAlexander et al., 2018). The quality of AI affects customer perceptions of brands (Shamps et al., 2015). Thus, hypothesis one is:
H1: There is a positive and significant influence between Artificial Intelligence on Customer Brand Relationship.

Artificial Intelligence can increase trust between different stakeholders (Hohenstein & Jung, 2020). AI can foster trust through digital services that encourage customers to interact and engage with the company. The results of Hanifin's (2019) study discussing what AI means for customer loyalty marketing, explained that improving customer experience is a motivation for 62% of companies to invest in AI. The study agreed on the positive relationship between AI and overall performance related to customer loyalty in the process. AI is the future and its potential is limitless. Companies can increase customer loyalty by utilizing AI technology. Thus, hypothesis two is:

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H2: There is a positive and significant influence between Artificial Intelligence on Customer Loyalty.

Product Knowledge (PK) and Customer Brand Relationship influence each other in several ways. PK refers to a comprehensive understanding of the features, benefits, and uses of a product that are essential for customer service and brand interactions. When product knowledge is in-depth, companies can provide accurate and solution-oriented information that can indirectly build a good relationship between customers and brands. In addition, product knowledge can increase employee confidence, ensuring that employees can explain products fluently and exude an aura of confidence to customers (Siagian et al., 2020). When customers are aware of the features of an AI-based company, it can foster a relationship between customers and brands.

Product Knowledge shows how well customers know all the information related to the product. If customers know the features of AI-based companies, it can increase the level of loyalty. In line with the findings, Setyadi et al. (2024) showed that customers who have higher product knowledge tend to be more efficient in selecting and assessing information. In the study of Cowley and Mitchell (2003), it has been proven that product knowledge affects the learning and organization of product information, especially loyalty. Thus, hypotheses three, four, and five are:

H3: There is a positive and significant influence between Artificial Intelligence on Product Knowledge.
H4: There is a positive and significant influence on Product Knowledge mediation on the relationship between Artificial Intelligence on Customer Brand Relationship.
H5: There is a positive and significant influence on Product Knowledge mediation on the relationship between Artificial Intelligence on Customer Loyalty.

III. METHODOLOGY

In this study, the objects of research are Customer Brand Relationship, Customer Loyalty, Artificial Intelligence, and Product Knowledge. The subjects of this study are the Millennial and Generation Z communities on the island of Java who have the Spotify application.

This study uses comparative research with a quantitative approach. Quantitative research is a research approach that primarily uses a post-positivist paradigm in developing science, such as thinking about cause and effect, reduction to variables, hypotheses, and specific questions using measurement, observation, and theory testing.

In this study, primary data collection techniques were used through questionnaires distributed using Google Form. There are several requirements for respondents, such as Spotify users, aged between 12-45 years, and domiciled in Java.

First, respondents are asked to fill in personal data, such as name, email, age, gender, occupation, and how long the respondent has used Spotify. After that, continue with general questions to questions related to the respondent's habits in using Spotify. The scale used is a Likert scale, where the questions asked will measure the respondents' opinions and perceptions of Spotify.

The steps taken in data collection, namely distributing questionnaires online via Google Form via social media with a minimum of 50 respondents, ensuring the confidentiality of respondent data and voluntary participation, and analyzing the collected data using comparative quantitative research methods that compare variables (Customer Brand Relationship, Customer Loyalty, Artificial Intelligence, and Product Knowledge) to identify differences or similarities between them.

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Population and Samples

The population of this study is the millennial and Z generations who are on the island of Java. This study focuses on the island of Java because half of the entire population of Indonesia lives on the island of Java, which is around 56.10% or around 151.59 million people. In addition, the island of Java is the capital city of Indonesia which is able to become a national barometer in diversity. While the sample of this study is the millennial and Z generations on the island of Java who use the Spotify application.

Method of Analysis

In this study, the data obtained from the questionnaire results will be completed, tidied up, and grouped based on variables and types of responses. Then the author analyzes the data to answer the problem formulation and test the hypotheses that have been made. Data analysis is in the form of simplifying data into a form that is easier to understand.

This study uses a questionnaire or survey research instrument that provides a list of questions answered by respondents based on events that actually occurred. The author chose to test the questionnaire or questionnaire instrument because it does not require the presence of the author when the respondent fills in the answer, can be given simultaneously to many respondents, and respondent data is confidential so that respondents do not need to worry about other people's responses to their answers.

The author calculates the correlation of the total score and the score of each question. If the correlation is positive, then the variable can be considered valid. Conversely, if the correlation is negative, then the variable is considered invalid. The average valid correlation value must be greater than 0.5 (> 0.5).

The author calculates consistency in the questionnaire using the Cronbach's Alpha Method which can show the level of consistency in the measurement scale. If the Cronbach's Alpha value is more than 0.7 (> 0.7), then the questionnaire is considered reliable.

IV. DISCUSSION

Profile of the Respondents

Demographic analysis involves analyzing a population based on various demographic factors to understand the population's character, trends, or other factors that influence something. The demographic data of this study includes gender, age, status, domicile, duration of Spotify use, and familiarity with Artificial Intelligence. It is known that the respondents are dominated by women, which is 63.1% or 123 votes. While the number of male respondents is almost half less than female respondents, which is 36.9% or 72 votes.

The data shows that the majority of respondents are aged 12 - 22 years with a percentage of 85.6% or 167 votes. Then in second place, the age of 23 - 33 years has a value of 13.9% or 27 votes. Finally, 0.5% or 1 respondent is aged 34 - 43 years. From this data, it can be concluded that there are more Generation Z respondents than Millennials.

According to the data, more than half of the respondents are students, which is 68.2% or 133 votes. As many as 14.4% or 28 votes are students. As many as 12.8% or 25 votes are employees. On the other hand, as many as 4.6% or 9 votes are workers in other fields. These results further strengthen that generation Z outperforms the research results.

The data shows that 153 respondents are domiciled in JABODETABEK with the majority being around Jakarta. Meanwhile, 42 respondents are domiciled outside JABODETABEK, some of which are Bandung, Semarang, Batam, Bali, Solo, Banten, and others. This means that more than 75% of respondents are in the JABODETABEK area.

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The data shows that the duration of respondents' Spotify usage varies. Around 51.3% or 99 active Spotify votes for 1 - 3 hours a day. As many as 19.2% or 37 active Spotify voices for less than 1 hour (< 1 hour) in a day. As many as 18.7% or 36 active Spotify voices for 4 - 6 hours. Finally, as many as 10.9% or 21 active Spotify voices for more than 6 hours (> 6 hours). This data reflects the variation in Spotify usage experience with the majority of users around 1 - 3 hours in one day.

The data assesses whether respondents are familiar or accustomed to any service based on Artificial Intelligence (AI). It was concluded that 92.8% or 180 voices were familiar with AI-based services, but 7.2% or 14 voices were not familiar with AI-based services.

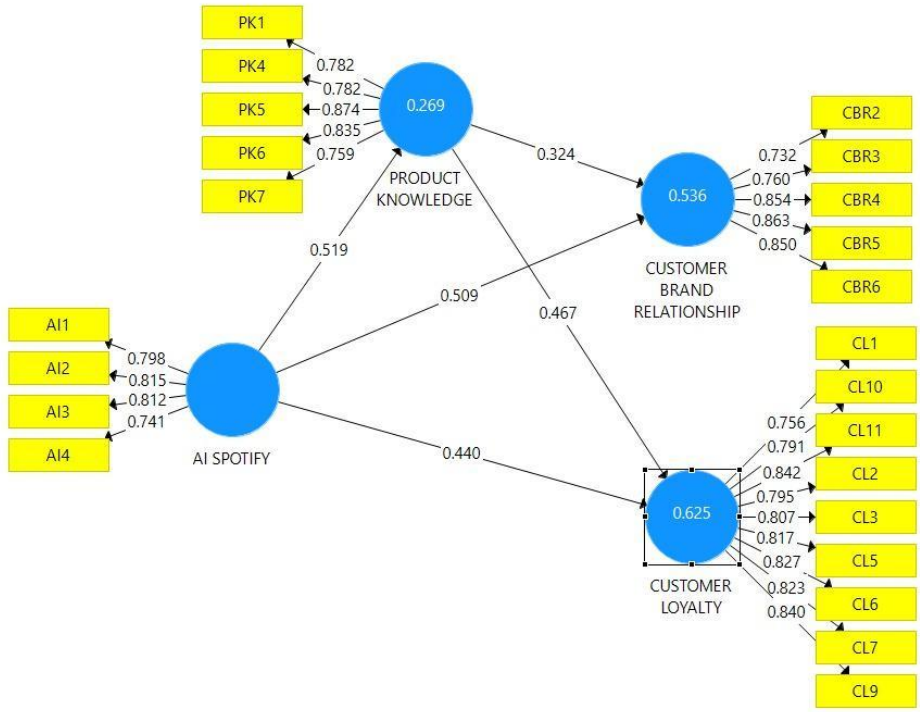

Figure 2 Validity and Reliability of the Model

Reliability and Validity

Before processing the data, it is necessary to conduct a trial of the indicators to ensure their validity and reliability. Data analysis in this study used the Partial Least Square Structural Equation Modeling (PLS-SEM) method with SmartPLS software. The two stages of data analysis in this study include Measurement Model Analysis (External) and Structural Model Analysis (Internal). In the External Model, an evaluation is carried out to determine the validity and reliability of the model. While in the Internal Mode, an evaluation is carried out to predict the relationship between variables. The SmartPLS test results after the indicators were removed can be seen in Figure 2.

To assess discriminant validity, the Heterotrait Monotrait Ratio (HTMT) criteria were implemented. Ghozali (2016) stated that a variable must have an HTMT value of less than 0.90 (<0.90) if it is to meet the HTMT assessment requirements. The following are the results of the Heterotrait Monotrait Ratio (HTMT) of this study.

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Table 1 HTMT

Heterotrait-Monotrait Ratio (HTMT)

	AI	CBR	CL	PK
AI				
CBR	0,809			
CL	0,785	0,889		
PK	0,617	0,666	0,765	

Ghozali (2016) stated that the level of validity of the correlation of the total score and questions is positive if it is more than 0.5. All variables have a value of more than 0.5, meaning that all variables meet the requirements for the level of validity. Reliability testing is carried out in 2 ways, namely Cronbach's Alpha and Composite Reliability. Cronbach's Alpha is a correlation assessment based on a scale made with a scale of all variables, which measures the lower limit of the reliability value of a variable. The value is said to be reliable if it is more than 0.70 (> 0.70). Composite Reliability is a test of the reliability value of the indicators in a variable, which provides the actual reliability value of a variable. Ghozali (2016) stated that Composite Reliability is better in predicting internal consistency of variables with the condition that the value is more than 0.70 (> 0.70). The following are the results of Cronbach's Alpha and Composite Reliability of this study.

Table 2 Construct Reliability and Validity

Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	AVE
AI	0,801	0,803	0,871	0,627
CBR	0,871	0,877	0,907	0,663
CL	0,935	0,936	0,945	0,658
PK	0,866	0,873	0,903	0,652

Coefficient of Determination

In the assessment of the Coefficient of Determination, there are two types of measurements, namely R Square and R-Square Adjusted. R-Square is a calculation of the proportion of the dependent variable described by the independent variable in the model. The relevant requirement of R-Square is valued from 0 to 1, where a value of 0 means it does not explain variability, while a value of 1 means it explains all variability. The higher the R Square, the better the variable. To overcome the limitations of R Square, R Square Adjusted is used to avoid overfitting, so that the model is more accurate. Ghozali (2016) mentioned that R-Square Adjusted is more accurate than R-Square.

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Table 3 R-Square

R Square

	R Square	R Square Adjusted
CBR	0,536	0,531
CL	0,625	0,621
PK	0,269	0,265

From Table 3, Coefficient of Determination (R2), there are 3 variables that are influenced, namely Product Knowledge, Customer Brand Relationship, and Customer Loyalty. All R-Square and R-Square Adjusted values are between 0 - 1, so they meet the eligibility requirements. Artificial Intelligence has an influence of 0.265 or 26.5% on Product Knowledge, the remaining 0.735 or 73.5% is influenced by variables outside this study. Artificial Intelligence and Product Knowledge have an influence of 0.531 or 53.1% on Customer Brand Relationship, the remaining 0.469 or 46.9% is influenced by variables outside this study. Artificial Intelligence and Product Knowledge have an influence of 0.621 or 62.1% on Customer Brand Relationship, the remaining 0.379 or 37.9% is influenced by variables outside this study.

Hypothesis Testing (Direct Paths)

Table 4 Hypothesis Testing (Direct Paths)

Jalur	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Value
AI → CBR	0,509	0,513	0,086	5,937	0,000
AI → CL	0,440	0,440	0,082	5,396	0,000
AI → PK	0,519	0,524	0,064	8,157	0,000
AI → PK → CBR	0,324	0,320	0,071	4,541	0,000
AI → PK → CL	0,467	0,468	0,067	6,970	0,000

Based on Table 4, all path coefficients show a positive direction because they are more than 0 (> 0). T Statistic is a hypothesis test through bootstrapping. Ghozali (2016) stated that T Statistic is considered significant if it has a value of more than 1.96 (> 1.96). Thus, the 3 (three) hypotheses of this study are accepted and considered relevant.

Hypothesis Testing (Indirect Paths)

Haryono (2016) said that indirect influence aims to analyze the strength of influence of one variable on another variable. This influence can be observed from the path coefficient of the exogenous variable to the endogenous variable. Exogenous variables are variables that influence other variables, while

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endogenous variables are variables that are influenced by other variables. The indirect influences of this study can be seen in Table 5.

Table 5 Hypothesis Testing Indirect Paths

Path	Coefficients	M	STDEV	P Value
AI → CBR	0.168	0.168	0.043	0.000
AI → CL	0.242	0.246	0.047	0.000

To determine whether the hypothesis is accepted or rejected, it can be seen through the P Value. If the P Value is more than 0.05 (> 0.05), then the hypothesis is considered irrelevant and rejected.

Artificial Intelligence → Customer Brand Relationship

The direct relationship between Artificial Intelligence and Customer Brand Relationship is significantly positive. On the other hand, the indirect relationship between Artificial Intelligence and Customer Brand Relationship is also positive but not significant. Based on the direction of the coefficient path (positive 0.509), the T Statistic number is greater than 1.96 (5.937), and the P value is smaller than 0.05 (0.000), it is decided that H1 is accepted. The adaptation of Artificial Intelligence for Spotify affects the level of Customer Brand Relationship.

Artificial Intelligence → Customer Loyalty

The direct relationship between Artificial Intelligence and Customer Loyalty is significantly positive. On the other hand, the indirect relationship between Artificial Intelligence and Customer Brand Relationship is also positive but not significant. Based on the direction of the coefficient path (positive 0.440), the T Statistic number is greater than 1.96 (5.936), and the P value is smaller than 0.05 (0.000), it is decided that H2 is accepted. The adaptation of Artificial Intelligence for Spotify affects the level of Customer Loyalty.

Artificial Intelligence → Product Knowledge

The direct relationship between Product Knowledge and Artificial Intelligence is significantly positive. Based on the direction of the coefficient path (positive 0.519), the T Statistic number is greater than 1.96 (8.157), and the P value is smaller than 0.05 (0.000), then it is decided that H3 is accepted. The adaptation of Artificial Intelligence for Spotify affects the level of Product Knowledge.

Artificial Intelligence → Product Knowledge → Customer Brand Relationship

The direct relationship between Artificial Intelligence and Product Knowledge and Customer Loyalty is significantly positive. Based on the direction of the coefficient path (positive 0.324), the T Statistic number is greater than 1.96 (4.541), and the P value is smaller than 0.05 (0.000), then it is decided that H4 is accepted. The adaptation of Artificial Intelligence for Spotify with the mediation of Product Knowledge affects the level of Customer Brand Relationship.

Artificial Intelligence → Product Knowledge → Customer Loyalty

The direct relationship of Artificial Intelligence to Product Knowledge and Customer Brand Relationship is significantly positive. Based on the direction of the coefficient path (positive 0.467), the T Statistic number is greater than 1.96 (6.970), and the P value is smaller than 0.05 (0.000), then it is decided

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that H5 is accepted. The adaptation of Artificial Intelligence for Spotify with the mediation of Product Knowledge affects the level of Customer Loyalty.

Discussion

Spotify is a music streaming platform that was formed in 2006. The popularity of this music streaming application has skyrocketed since the COVID-19 pandemic, especially among Millennials and Generation Z. The millennial generation is the generation born from 1981 to 1996, while Generation Z is the generation born from 1997 to 2010. The presence of the internet in Indonesia began in the 1990s, where in 1994 the first ISP in Indonesia was launched, Ipteknet. Therefore, these two generations have a closer relationship with technology. This study focuses on Java Island because half of the entire population of Indonesia lives on Java Island, which is around 56.10% or around 151.59 million people. In addition, Java Island is the capital city of Indonesia which is able to become a national barometer in diversity.

Along with the development of technology, Artificial Intelligence is one of the innovations that is widely discussed. Spotify also implemented an AI-based service called smart shuffle, which was launched on March 9, 2023. With this feature, the application can insert songs outside the playlist and play random songs according to the playlist being listened to. Not only that, Spotify's song recommendations can also be adjusted to each user's preferences and music tastes. Spotify's purpose in implementing an AI-based service is to strengthen data analysis, then the data will be used to provide a better user experience. This study will prove the effect of implementing Artificial Intelligence on Customer Brand Relationship and Customer Loyalty, and is mediated by Product Knowledge.

The Influence of Artificial Intelligence on Customer Brand Relationship

Artificial Intelligence is modeled as a machine and programmed to resemble humans that can combine and manage a large amount of stored data quickly. AI allows software to automatically learn patterns and adjust recommendations according to the preferences of each Spotify user, so that it can create user interaction with Spotify. In line with the research of Hamzah et al. (2021), Customer Brand Relationship can be fostered by developing interactions between customers and brands. Through the questionnaire distributed, most respondents said that they were happy to use Spotify with the quality of Artificial Intelligence services that provide a consistent quality experience.

In Table 4, the determinant coefficient is 0.509, which means that the variability of Customer Brand Relationship can be proven by 50.9% by Artificial Intelligence. The effect size value of 0.678 indicates that the effect of the size of the Artificial Intelligence variable on Customer Brand Relationship is moderate. The Predictive Relevance value of 0.350 demonstrates good predictions of endogenous variables.

Based on the results, it is determined that H1 is accepted because this study proves that Artificial Intelligence has a positive and significant relationship with Customer Brand Relationship. Therefore, the implementation of Artificial Intelligence on Spotify will have an impact on Customer Brand Relationship for Millennial and Generation Z users on Java Island.

The Influence of Artificial Intelligence on Customer Loyalty

In Table 4, the determinant coefficient is 0.440, which means that the variability of Customer Loyalty can be proven as much as 44.0% by Artificial Intelligence. The effect size value of 0.683 indicates that the effect of the size of the Artificial Intelligence variable on Customer Loyalty is moderate. The Predictive Relevance value of 0.403 demonstrates good prediction of endogenous variables.

Based on the writings of Suchanek, Richter & Kralova (2014), product quality is the ability to produce perfect products. Product quality is the standard between actual service performance and customer expectations (Atiyah, 2016). Product quality is seen from several factors, such as packaging, price, and

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usability. By fulfilling expectations, customer satisfaction will be created. Satisfied customers will also create customer loyalty. Through the questionnaire distributed, most respondents said that they were satisfied with Spotify's Artificial Intelligence service and Spotify's service quality because of Artificial Intelligence.

Based on the results, it is defined that H2 is accepted because this study proves that Artificial Intelligence has a positive and significant relationship with Customer Loyalty. Therefore, the implementation of Artificial Intelligence on Spotify will have an impact on Customer Loyalty for Millennial and Z Generation users in Java.

The Influence of Artificial Intelligence on Product Knowledge

In Table 4, the determinant coefficient is 0.519, which means that the variability of Product Knowledge can be proven as much as 51.9% by Artificial Intelligence. The effect size value of 0.519 indicates that the effect of the size of the Artificial Intelligence variable on Product Knowledge is moderate. The Predictive Relevance value of 0.170 demonstrates good predictions of endogenous variables.

In accordance with Elsya and Indriyani's (2020) study, product recognition is the entire scope of accurate information in consumer memory, which information can later be used as a consideration in determining further actions. Product knowledge is various types of knowledge, meanings, and beliefs recorded in customer memory (Siagian et al., 2020).

Based on the results, it is defined that H3 is accepted because this study proves that Artificial Intelligence has a positive and significant relationship with Product Knowledge. Therefore, the implementation of Artificial Intelligence on Spotify will have an impact on Product Knowledge for Millennial and Generation Z users on Java Island.

The Influence of Artificial Intelligence on Customer Brand Relationship Mediated by Product Knowledge

Table 4 explains that there is a positive and significant relationship between Artificial Intelligence and Customer Brand Relationship mediated by Product Knowledge, which is 0.324 or 32.4%. The effect size value of 0.324 indicates that the effect of the size of the Artificial Intelligence variable on Customer Brand Relationship mediated by Product Knowledge is relatively small. The T Statistics value of 4.541 proves that this hypothesis is relevant and significant.

Based on the results, it is defined that H4 is accepted because this study proves that Artificial Intelligence has a positive and significant relationship with Customer Brand Relationship. This means that Artificial Intelligence has a positive impact on Customer Brand Relationship with Product Knowledge mediation. Therefore, the implementation of Artificial Intelligence on Spotify will have an impact on Customer Brand Relationship with Product Knowledge mediation for Millennial and Z Generation users in Java.

The Influence of Artificial Intelligence on Customer Loyalty Mediated by Product Knowledge

Table 5 explains that there is a positive and significant relationship between Artificial Intelligence and Customer Loyalty mediated by Product Knowledge, which is 0.467 or 46.7%. The effect size value of 0.467 indicates that the effect size of the Artificial Intelligence variable on Customer Loyalty mediated by Product Knowledge is relatively small. The T Statistics value of 6.970 proves that this hypothesis is relevant and significant.

Based on the results, it is defined that H5 is accepted because this study proves that Artificial Intelligence has a positive and significant relationship with Customer Loyalty. This means that Artificial Intelligence has a positive impact on Customer Loyalty with Product Knowledge mediation. Therefore, the

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implementation of Artificial Intelligence on Spotify will have an impact on Customer Loyalty with Product Knowledge mediation for Millennial and Z Generation users in Java.

V. CONCLUSION

Based on the results of observations and analysis in this study, it can be concluded as follows: (1) Artificial Intelligence has a positive and significant effect on Customer Brand Relationship on Millennials and Generation Z Spotify users in Java, (2) Artificial Intelligence has a positive and significant effect on Customer Loyalty on Millennials and Generation Z Spotify users in Java, (3) Artificial Intelligence has a positive and significant effect on Product Knowledge on Millennials and Generation Z Spotify users in Java, (4) Artificial Intelligence has a positive and significant effect on Customer Brand Relationship mediated by Product Knowledge on Millennials and Generation Z Spotify users in Java, and (5) Artificial Intelligence has a positive and significant effect on Customer Loyalty mediated by Product Knowledge on Millennials and Generation Z Spotify users in Java.

The overall conclusion is that Artificial Intelligence has a direct effect on Customer Brand Relationship and Customer Loyalty. The mediation of Product Knowledge also has a positive effect, but is not really necessary. Without Product Knowledge mediation, Artificial Intelligence still has a direct effect on Customer Brand Relationship and Customer Loyalty.

Based on the results of observations and analysis in this study, the author presents the following suggestions: (1) Continue to implement Artificial Intelligence-based services as a way to analyze user data and get closer to users, (2) Add other Artificial Intelligence-based features that can improve Customer Brand Relationship and Customer Loyalty, (3) Utilize the integration of user data to create the latest trends among Millennial and Generation Z users, (4) Expand the scope of research outside Java or in the international realm, (5) Develop a research model and add several new relevant and valid variables, and (6) Optimize the distribution of questionnaires evenly between Millennials and Generation Z.

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