

## Influence of Chatbot Linguistic Anthropomorphism on Purchase Intention Through Social Presence and Trust

Muhammad Rozziq Abdurrahman<sup>1</sup>, Ratih Amelia<sup>2</sup>

<sup>1,2</sup>Digital Business / Faculty of Economics and Business, State University of Surabaya

\*Corresponding Author

Email: [muhammadrozziq.23370@mhs.unesa.ac.id](mailto:muhammadrozziq.23370@mhs.unesa.ac.id)

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### Abstract

The rapid development of artificial intelligence (AI) has encouraged businesses to adopt chatbot technology as a digital customer service solution. However, automated interactions often lack human characteristics that may influence consumers' psychological responses and purchase decisions. This study aims to examine the influence of chatbot linguistic anthropomorphism on consumer purchase intention through the mediating roles of social presence and trust in digital SME customer service interactions. This research employed a quantitative approach with an experimental design using two chatbot communication scenarios: anthropomorphic and non-anthropomorphic chatbot interactions. Data were collected through an online questionnaire involving 140 valid respondents who had experience interacting with chatbot-based or online customer services. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.2.9. The results indicate that chatbot linguistic anthropomorphism positively influences social presence ( $\beta = 0.479$ ,  $t = 8.882$ ,  $p < 0.001$ ). Furthermore, social presence significantly increases consumer trust ( $\beta = 0.690$ ,  $t = 11.038$ ,  $p < 0.001$ ) and purchase intention ( $\beta = 0.374$ ,  $t = 4.338$ ,  $p < 0.001$ ), while trust also contributes to strengthening purchase intention ( $\beta = 0.483$ ,  $t = 6.692$ ,  $p < 0.001$ ). The mediation analysis confirms that social presence and trust act as psychological mechanisms that explain how human-like chatbot communication influences consumer purchase intention. These findings extend the Stimulus-Organism-Response (S-O-R) framework in AI-based customer service research and provide practical insights for digital SMEs in designing chatbot communication strategies that combine automation with human-like interaction elements to improve customer experiences and encourage purchase decisions.

**Keywords:** Artificial Intelligence, Chatbot Anthropomorphism, Purchase Intention, Social Presence, Trust

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## INTRODUCTION

The rapid advancement of artificial intelligence (AI) technology has transformed the way businesses communicate and build relationships with consumers. In the digital era, companies are increasingly required to provide fast, interactive, and personalized services to meet changing consumer expectations. One of the AI-based technologies that has gained significant attention in digital customer service is the chatbot, which enables automated conversations between businesses and consumers through natural language interactions (Adam et al., 2021). The implementation of AI in marketing activities not only improves operational efficiency but also creates new opportunities for companies to develop more adaptive and customer-oriented service experiences (Huang & Rust, 2022). Chatbot implementation in marketing and customer service activities can improve operational efficiency, provide faster responses, and support more personalized customer experiences (Kbaier et al., 2025). In e-commerce and social commerce contexts, chatbots also support business-consumer interactions during the pre-purchase stage that influences consumer decision-making (Meng et al., 2025). Consumer trust also plays a key role in technology-based business interactions, including SMEs that rely on digital communication channels (Amelia Ratih et al., 2024).

Chatbots have become an essential communication tool in digital business ecosystems because they can support consumers throughout the purchasing process, from obtaining product information to making purchase decisions. This technology is increasingly relevant for small and medium enterprises (SMEs), where digital platforms such as conversational commerce channels allow businesses to interact with consumers more effectively despite limited resources. However,

although chatbots provide various benefits, the absence of human elements in automated interactions can create psychological distance between consumers and technology. Therefore, designing chatbot communication that feels more natural and socially engaging has become an important aspect in improving customer experience. Previous studies also indicate that chatbot anthropomorphism can improve user experience, strengthen engagement, and influence consumer perceptions of digital interactions (Amelia & Sartika, 2025), while affecting emotional closeness and user involvement during interactions (Singh et al., 2024)

One approach that can enhance human-like interaction in chatbot communication is linguistic anthropomorphism. Anthropomorphism refers to the tendency to attribute human characteristics, intentions, or emotions to non-human entities, including AI-based systems (Epley et al., 2007). In chatbot interactions, linguistic anthropomorphism is represented through communication elements such as natural conversational styles, personal greetings, emotional expressions, and human-like language cues. These characteristics allow users to perceive chatbots not merely as automated systems but as social entities capable of creating more meaningful interactions. Previous studies have shown that human-like communication cues in conversational agents can strengthen users' perceptions of warmth, social connection, and engagement during digital interactions (Seeger et al., 2021)

Social presence is an important psychological mechanism that explains how users perceive social interaction when communicating through digital technology. In AI-based interactions, social presence reflects the extent to which users feel a sense of human warmth, personal connection, and social involvement during conversations with chatbots. Anthropomorphic characteristics embedded in AI systems can increase the perception that users are interacting with a socially present entity rather than merely using a technological tool (Li & Sung, 2021). Therefore, chatbot communication that adopts human-like elements is expected to strengthen users' perceived social presence and create more engaging customer service experiences

In digital service environments, social presence also plays an important role in building consumer trust. The presence of social and human-like elements in chatbot interactions can reduce uncertainty by creating a more comfortable and reliable communication experience. Trust becomes a critical factor in AI-based services because consumers need confidence that the technology can provide accurate information, reliable assistance, and appropriate responses to their needs (Choung et al., 2023). Previous research also emphasizes that human-like interactions and social characteristics in chatbots contribute to the formation of initial trust toward AI-based service agents (Mostafa & Kasamani, 2022). Furthermore, social presence has been shown to increase consumer trust, which subsequently influences purchasing behavior in digital environments (Monisha & Chellamuthu, 2026)

Consumer trust is closely related to purchase intention because individuals are more likely to engage in transactions when they believe that a digital service is credible and dependable. In online purchasing environments, trust reduces perceived risks and strengthens consumers' willingness to continue their decision-making process. In AI-based digital service contexts, positive user experiences generated through chatbot interactions also contribute to shaping consumer responses and behavioral intentions toward digital services (Pillai & Sivathanu, 2020) Previous studies have demonstrated that trust in AI-based services positively influences consumer responses, including purchase intention and acceptance of digital interactions (Habib et al., 2024). Furthermore, chatbot communication quality, such as responsiveness, personalization, and interaction capability, can enhance customer relationships and encourage positive behavioral intentions (Cheng & Jiang, 2022)

The relationship among chatbot linguistic anthropomorphism, social presence, trust, and purchase intention can be explained through the Stimulus-Organism-Response (S-O-R) framework. This theory explains that external stimuli can influence individuals' internal

psychological states, which subsequently lead to specific behavioral responses (Mehrabian & Russell, 1974). In this study, linguistic anthropomorphism in chatbot communication represents the stimulus that influences consumers' internal psychological processes through social presence and trust as the organism. These psychological responses subsequently affect purchase intention as the final consumer response

Previous studies have shown that anthropomorphic characteristics in chatbot communication can influence users' psychological responses during digital interactions. Human-like communication elements, such as natural language, personal expressions, and emotional cues, allow users to perceive chatbot interactions as more socially engaging. These characteristics strengthen the perception that users are communicating with a socially present entity rather than merely interacting with an automated system (Konya-Baumbach et al., 2023). Therefore, this study proposes the following hypothesis:

H1: Chatbot linguistic anthropomorphism has a positive effect on social presence

Social presence plays an important role in shaping consumer trust because interactions that feel more personal and socially connected can reduce uncertainty in technology-mediated communication. When users experience a higher level of social presence, they tend to develop greater confidence in the reliability and credibility of AI-based services (Mostafa & Kasamani, 2022). Thus, the following hypothesis is proposed:

H2: Social presence has a positive effect on consumer trust

Consumer trust is considered an essential factor in digital transactions because consumers need confidence before making purchasing decisions through technology-based services. Higher trust toward digital services increases consumers' willingness to engage with businesses and strengthens purchase-related decisions (Habib et al., 2024). Therefore, this study proposes:

H3: Consumer trust has a positive effect on purchase intention

In addition to influencing trust, social presence can directly affect consumers' behavioral responses. Digital interactions that create a stronger feeling of human connection can increase consumer engagement and encourage positive responses toward products or services. Therefore, the following hypothesis is formulated:

H4: Social presence has a positive effect on purchase intention

Furthermore, this study examines the mediating role of social presence and consumer trust in explaining the relationship between chatbot linguistic anthropomorphism and purchase intention. Based on the Stimulus-Organism-Response framework, human-like chatbot communication acts as a stimulus that influences consumers' internal psychological states, which subsequently shape behavioral responses. Therefore, this study proposes the following mediation hypotheses:

H5: Social presence mediates the effect of chatbot linguistic anthropomorphism on purchase intention

H6: Consumer trust mediates the effect of social presence on purchase intention

H7: Social presence and consumer trust sequentially mediate the effect of chatbot linguistic anthropomorphism on purchase intention

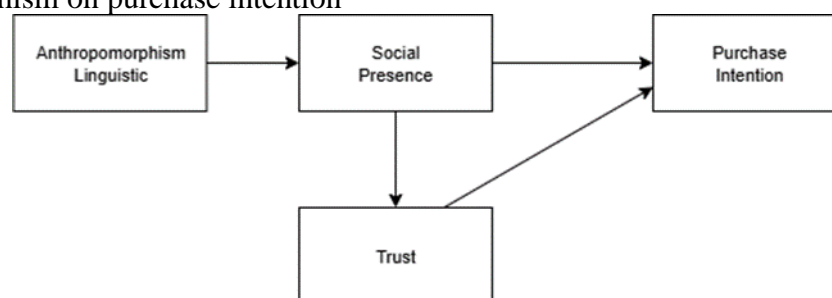


Figure 1 Conceptual Framework

Although previous studies have examined the role of anthropomorphism in AI-based interactions, several research gaps remain. First, most existing studies have focused on chatbot implementation in large-scale e-commerce platforms and established digital services, while limited attention has been given to chatbot interactions in small and medium enterprise (SME) contexts, where customer relationships often depend on more personal communication approaches. Second, previous research has mainly investigated the direct influence of chatbot characteristics on consumer responses, while the psychological mechanisms explaining how human-like communication influences purchase intention require further exploration

Moreover, previous findings regarding chatbot anthropomorphism remain inconsistent. While several studies indicate that anthropomorphic elements can improve consumer responses by creating more natural and engaging interactions, other studies suggest that excessive human-like characteristics may reduce communication effectiveness in certain situations (Yang et al., 2025). These inconsistent findings indicate that the effectiveness of chatbot anthropomorphism may depend on psychological processes experienced by consumers during digital interactions

To address these gaps, this study examines the influence of chatbot linguistic anthropomorphism on consumer purchase intention by integrating social presence and trust as mediating mechanisms. Unlike previous studies that primarily examine chatbot adoption or general AI acceptance, this research focuses on differences in chatbot communication styles by comparing non-anthropomorphic chatbot communication with anthropomorphic chatbot communication containing human-like language and emotional cues. This study also adopts the Stimulus-Organism-Response (S-O-R) framework to explain how chatbot communication characteristics influence consumers' internal psychological states and subsequently shape behavioral responses

Several previous studies have investigated the role of chatbot characteristics and psychological mechanisms in shaping consumer responses. (Konya-Baumbach et al., 2023) found that anthropomorphic characteristics in chatbot communication can strengthen users' perception of social presence by creating more human-like and socially engaging interactions. (Mostafa & Kasamani, 2022) demonstrated that social characteristics embedded in chatbot interactions contribute to building consumer trust toward AI-based service agents. Furthermore, (Habib et al., 2024) confirmed that consumer trust plays an important role in influencing purchase intention and consumer responses in digital service environments

Therefore, this study aims to analyze the influence of chatbot linguistic anthropomorphism on social presence, consumer trust, and purchase intention in digital SME customer service interactions. The findings of this study are expected to contribute theoretically to the development of AI chatbot and digital marketing literature, particularly in understanding the psychological mechanisms underlying human-like chatbot communication. Practically, this study provides insights for SMEs in designing chatbot communication strategies that create more engaging, trustworthy, and effective customer interactions

## **RESEARCH METHODS**

### **Types and Approaches of Research**

This study employed a quantitative approach with an experimental research design to examine the influence of chatbot linguistic anthropomorphism on consumers' psychological responses and purchase intention. According to Creswell and (Creswell & Creswell, 2018), quantitative research is an approach used to test objective theories by examining relationships among variables through measurable data and statistical analysis. Furthermore, experimental research design allows researchers to examine causal relationships by providing specific treatments and evaluating their effects on research outcomes. The experimental design used in

this study was a between-subject design, where participants were divided into two different treatment groups based on chatbot communication style

The first group received a chatbot interaction scenario using an anthropomorphic communication style characterized by casual language, personal expressions, and emotional elements such as emojis. Meanwhile, the second group received a chatbot interaction scenario using a non-anthropomorphic chatbot communication style with more neutral and task-oriented responses. This experimental approach was applied to identify differences in consumer responses caused by variations in chatbot linguistic characteristics

### **Experimental Procedure**

The experimental stimulus was designed in the context of customer service interactions for fashion product sales through the WhatsApp Business platform. This context was selected because it represents common digital communication activities conducted by small and medium enterprises (SMEs)

Participants were exposed to one of two chatbot conversation scenarios. The distribution of participants into experimental groups was conducted automatically using the "go to section based on answer" feature in Google Forms, allowing participants to receive different chatbot scenarios according to the experimental conditions

The examples of chatbot conversation stimuli used in the anthropomorphic and non-anthropomorphic conditions are presented in Figure 2 and 3



Figure 2 Chatbot Experimental Stimulus Anthropomorphic



Figure 3 Chatbot Experimental Stimulus Non-Anthropomorphic

A manipulation check was conducted to ensure that the experimental treatment successfully created differences in perceived chatbot anthropomorphism between groups. The manipulation check measured participants' perceptions of chatbot human-like communication through natural conversational style, personal communication cues, and emotional expressiveness indicators

### Population and Sample

The population of this study consisted of digital platform users who had experience interacting with chatbot-based services or online customer service. The sampling technique used was non-probability sampling with a purposive sampling method. Respondents were selected based on specific criteria, namely active digital platform users who had experience interacting with chatbot or online customer service

The minimum sample size was determined based on the recommendation of (Hair et al., 2010), which suggests a minimum sample size of ten times the number of indicators used in the research model. Based on the 12 indicators used in this study, the minimum required sample size was 120 respondents

A total of 164 responses were collected through an online questionnaire. After the data screening process, including respondent eligibility criteria and manipulation check evaluation,

140 valid responses were obtained for further analysis. The final sample consisted of 72 respondents in the non-anthropomorphic chatbot group and 68 respondents in the anthropomorphic chatbot group

### Data Collection Techniques

Data were collected using an online questionnaire with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The research instruments were adapted from previous studies related to social presence, consumer trust, and purchase intention

Social presence was measured using indicators related to perceived human interaction, communication engagement, and perceived social connection. Consumer trust was measured through reliability, information credibility, and service dependability indicators. Furthermore, purchase intention was measured using purchase likelihood, purchase interest, and purchase consideration indicators

### Data Analysis Techniques

The data analysis technique used in this study was Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS version 3.2.9. The analysis process consisted of two stages: measurement model evaluation (outer model) and structural model evaluation (inner model)

The measurement model evaluation included convergent validity, discriminant validity using the Heterotrait-Monotrait Ratio (HTMT), and construct reliability assessment based on loading factor, average variance extracted (AVE), composite reliability, and Cronbach's alpha values following PLS-SEM procedures (Hair et al., 2022)

The structural model evaluation was conducted by examining  $R^2$ ,  $f^2$ , and  $Q^2$  values. Hypothesis testing was performed using the bootstrapping procedure to determine the significance of relationships between variables. Furthermore, mediation analysis was conducted to examine specific indirect effects and sequential mediation mechanisms explaining how chatbot linguistic anthropomorphism influences purchase intention through social presence and trust. Chatbot linguistic anthropomorphism was included in the model as a dummy variable (1 = anthropomorphic chatbot; 0 = non-anthropomorphic chatbot) to analyze the effect of experimental manipulation on consumer psychological and behavioral responses.

## RESULTS AND DISCUSSION

### Results

*Table 1 t-Test: Two-Sample Assuming Unequal Variances*

|                              | Anthropomorphism | non-anthropomorphic |
|------------------------------|------------------|---------------------|
| Mean                         | 4,495098039      | 2,725308642         |
| Variance                     | 0,121774027      | 0,524073108         |
| Observations                 | 68               | 72                  |
| Hypothesized Mean Difference | 0                |                     |
| df                           | 104              |                     |
| t Stat                       | 18,58351305      |                     |
| P(T<=t) one-tail             | 3,96978E-35      |                     |
| t Critical one-tail          | 1,659637437      |                     |
| P(T<=t) two-tail             | 7,93957E-35      |                     |
| t Critical two-tail          | 1,983037526      |                     |

The results of the independent sample t-test presented in Table 1 indicate a significant difference in perceived anthropomorphism between the two chatbot communication styles. The

anthropomorphic chatbot group obtained a higher mean score ( $M = 4.49$ ) compared to the non-anthropomorphic chatbot group ( $M = 2.72$ ). The statistical results showed a significant difference between the two groups ( $t = 18.58$ ;  $p < 0.001$ ). These findings confirm that the experimental manipulation was successful, indicating that participants were able to distinguish between anthropomorphic and non-anthropomorphic chatbot communication styles

**Table 2 Outer Model**

| Variabel                  | Indikator | Loading Factor | AVE   | CR    | Alpha |
|---------------------------|-----------|----------------|-------|-------|-------|
| <i>Social Presence</i>    | M1.1      | 0.811          | 0.714 | 0.946 | 0.933 |
|                           | M1.2      | 0.848          |       |       |       |
|                           | M1.3      | 0.847          |       |       |       |
|                           | M1.4      | 0.866          |       |       |       |
|                           | M1.5      | 0.846          |       |       |       |
|                           | M1.6      | 0.848          |       |       |       |
|                           | M1.7      | 0.847          |       |       |       |
| <i>Trust</i>              | M2.1      | 0.864          | 0.672 | 0.935 | 0.918 |
|                           | M2.2      | 0.809          |       |       |       |
|                           | M2.3      | 0.799          |       |       |       |
|                           | M2.4      | 0.796          |       |       |       |
|                           | M2.5      | 0.821          |       |       |       |
|                           | M2.6      | 0.805          |       |       |       |
|                           | M2.7      | 0.839          |       |       |       |
| <i>Purchase Intention</i> | Y1        | 0.828          | 0.640 | 0.926 | 0.906 |
|                           | Y2        | 0.814          |       |       |       |
|                           | Y3        | 0.789          |       |       |       |
|                           | Y4        | 0.728          |       |       |       |
|                           | Y5        | 0.784          |       |       |       |
|                           | Y6        | 0.832          |       |       |       |
|                           | Y7        | 0.821          |       |       |       |

The results show that all measurement indicators achieved loading factor values above 0.70, indicating that each indicator adequately represents its respective construct. The Social Presence construct obtained loading factor values ranging from 0.811 to 0.866 with an AVE value of 0.714. The Trust construct showed loading factor values ranging from 0.796 to 0.864 with an AVE value of 0.672. Furthermore, Purchase Intention obtained loading factor values ranging from 0.728 to 0.832 with an AVE value of 0.640.

The reliability assessment results indicate that all constructs achieved Composite Reliability values above the recommended threshold of 0.70, consisting of Social Presence (0.946), Trust (0.935), and Purchase Intention (0.926). In addition, Cronbach's alpha values for all constructs exceeded 0.70, confirming that all variables have good internal consistency

**Table 3 Validitas Diskriminan (HTMT)**

|                           | <i>Antropomorfisme</i> | <i>Purchase Intention</i> | <i>Social Presence</i> | <i>Trust</i> |
|---------------------------|------------------------|---------------------------|------------------------|--------------|
| <i>Purchase Intention</i> | 0.440                  |                           |                        |              |
| <i>Social Presence</i>    | 0.492                  | 0.764                     |                        |              |
| <i>Trust</i>              | 0.456                  | 0.805                     | 0.742                  |              |

Based on the results presented in Table 3, all HTMT values between constructs were below the recommended threshold of 0.90. The highest HTMT value was found in the

relationship between Trust and Purchase Intention (0.805), followed by Social Presence and Purchase Intention (0.764), and Social Presence and Trust (0.742). Furthermore, the relationship between Anthropomorphism and other constructs showed relatively lower values, below 0.53. These findings confirm that each construct in the model has adequate discriminant validity and there is no indication of discriminant validity problems

**Table 4 R-Square**

|                           | $R^2$ | $R^2$ Adjusted | $Q^2$ |
|---------------------------|-------|----------------|-------|
| <i>Social Presence</i>    | 0.229 | 0.224          | 0.158 |
| <i>Trust</i>              | 0.476 | 0.472          | 0.308 |
| <i>Purchase Intention</i> | 0.621 | 0.616          | 0.383 |

The structural model evaluation results show that Social Presence obtained an  $R^2$  value of 0.229, indicating that chatbot linguistic anthropomorphism explains 22.9% of the variance in Social Presence. Furthermore, Trust obtained an  $R^2$  value of 0.476, showing that Social Presence explains 47.6% of the variance in Trust

Purchase Intention obtained the highest  $R^2$  value of 0.621, indicating that Social Presence and Trust collectively explain 62.1% of the variance in consumer purchase intention. In addition, the predictive relevance assessment showed that all  $Q^2$  values were greater than zero, consisting of Social Presence (0.158), Trust (0.308), and Purchase Intention (0.383). These results indicate that the research model has good predictive relevance

**Table 5 F-Square**

|                           | <i>Antropomorfisme</i> | <i>Purchase Intention</i> | <i>Social Presence</i> | <i>Trust</i> |
|---------------------------|------------------------|---------------------------|------------------------|--------------|
| <i>Antropomorfisme</i>    |                        |                           | 0.297                  |              |
| <i>Purchase Intention</i> |                        |                           |                        |              |
| <i>Social Presence</i>    | 0.193                  |                           |                        | 0.909        |
| <i>Trust</i>              | 0.322                  |                           |                        |              |

The results show that chatbot linguistic anthropomorphism has a medium effect on Social Presence with an  $f^2$  value of 0.297. Furthermore, Social Presence has a strong effect on Trust with an  $f^2$  value of 0.909, indicating that perceived social interaction plays a substantial role in explaining consumer trust

In addition, Social Presence has a medium effect on Purchase Intention with an  $f^2$  value of 0.193, while Trust has a large effect on Purchase Intention with an  $f^2$  value of 0.322. These findings indicate that Social Presence and Trust provide important contributions in explaining consumer purchase intention in chatbot-based digital interactions

**Table 6 Hypothesis testing**

| Variabel   | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics | P Values |
|--|---------------------|-----------------|----------------------------|--------------|----------|
| <i>Antropomorfisme</i> → <i>Social Presence</i>    | 0.479               | 0.481           | 0.054                      | 8.882        | 0.000    |
| <i>Social Presence</i> → <i>Trust</i>              | 0.690               | 0.690           | 0.063                      | 11.038       | 0.000    |
| <i>Trust</i> → <i>Purchase Intention</i>           | 0.483               | 0.485           | 0.072                      | 6.692        | 0.000    |
| <i>Social Presence</i> → <i>Purchase Intention</i> | 0.374               | 0.375           | 0.086                      | 4.338        | 0.000    |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| <i>Antropomorfisme → Social Presence → Purchase Intention</i>         | 0.179 | 0.180 | 0.047 | 3.835 | 0.000 |
| <i>Social Presence → Trust → Purchase Intention</i>                   | 0.333 | 0.334 | 0.054 | 6.152 | 0.000 |
| <i>Antropomorfisme → Social Presence → Trust → Purchase Intention</i> | 0.160 | 0.161 | 0.033 | 4.843 | 0.000 |

The hypothesis testing results show that chatbot linguistic anthropomorphism has a positive and significant effect on social presence ( $\beta = 0.479$ ,  $t = 8.882$ ,  $p < 0.001$ ), indicating that H1 is supported. This finding demonstrates that chatbot communication containing human-like linguistic elements increases users' perception of social presence during digital interactions.

Social presence was found to have a positive and significant effect on consumer trust ( $\beta = 0.690$ ,  $t = 11.038$ ,  $p < 0.001$ ), supporting H2. This result indicates that a higher perception of social presence can strengthen consumer trust toward chatbot-based customer service.

Furthermore, consumer trust has a positive and significant effect on purchase intention ( $\beta = 0.483$ ,  $t = 6.692$ ,  $p < 0.001$ ), confirming that H3 is supported. These results indicate that consumers who develop greater trust toward chatbot-based services tend to have stronger purchase intentions.

The results also indicate that social presence has a positive and significant effect on purchase intention ( $\beta = 0.374$ ,  $t = 4.338$ ,  $p < 0.001$ ), supporting H4. This finding suggests that the perception of human-like interaction in chatbot communication directly contributes to consumers' willingness to make purchase decisions.

In addition to direct effects, mediation analysis was conducted to examine the indirect relationships between variables. The results show that social presence significantly mediates the relationship between chatbot linguistic anthropomorphism and purchase intention ( $\beta = 0.179$ ,  $t = 3.835$ ,  $p < 0.001$ ), indicating that H5 is supported.

Furthermore, consumer trust significantly mediates the relationship between social presence and purchase intention ( $\beta = 0.333$ ,  $t = 6.152$ ,  $p < 0.001$ ), supporting H6. These findings indicate that social presence contributes to purchase intention by increasing consumer trust toward chatbot-based services.

Finally, the serial mediation analysis shows that chatbot linguistic anthropomorphism indirectly influences purchase intention through social presence and consumer trust ( $\beta = 0.160$ ,  $t = 4.843$ ,  $p < 0.001$ ). Therefore, H7 is supported, confirming that social presence and trust sequentially explain the mechanism through which human-like chatbot communication influences consumer purchase intention.

Based on the hypothesis testing results, all proposed relationships in the research model were supported. The following section discusses the theoretical interpretation of these findings by relating the results to previous studies and the Stimulus-Organism-Response (S-O-R) framework

## Discussion

### The Influence of Chatbot Linguistic Anthropomorphism on Social Presence

The findings of this study indicate that chatbot linguistic anthropomorphism has a positive and significant effect on social presence. This result demonstrates that human-like communication characteristics in chatbot interactions, such as natural conversational language, personal expressions, and emotional cues, can increase users' perception of social interaction during digital customer service experiences. When chatbots provide responses that resemble human communication patterns, users tend to perceive the interaction as warmer, more personal, and socially connected

This finding supports previous studies stating that anthropomorphic characteristics embedded in conversational agents can strengthen the perception of human presence in technology-mediated interactions (Seeger et al., 2021). Furthermore, human-like communication cues in AI-based systems can reduce psychological distance between users and technology, thereby increasing perceived social connection and engagement (Li & Sung, 2021). These results also strengthen previous findings that chatbot anthropomorphism contributes to more natural and interactive digital experiences (Konya-Baumbach et al., 2023; Yang et al., 2025)

### **The Influence of Social Presence on Consumer Trust**

The results show that social presence has a positive and significant influence on consumer trust. This finding indicates that consumers are more likely to trust chatbot-based services when they perceive a stronger sense of human presence during digital interactions. Socially engaging communication can reduce uncertainty because users feel that the chatbot provides more responsive and personalized assistance

This result is consistent with previous research explaining that social characteristics in chatbot interactions contribute to the development of trust toward AI-based service agents (Mostafa & Kasamani, 2022). In this context, social presence acts as an important psychological factor that connects human-like digital interactions with consumer trust formation

### **The Influence of Consumer Trust on Purchase Intention**

The findings reveal that consumer trust has a positive and significant influence on purchase intention. This result indicates that consumers who perceive chatbot-based services as reliable, credible, and capable of providing appropriate assistance are more likely to develop stronger intentions to purchase products

Trust plays an important role in digital transactions because consumers need confidence before making purchase decisions in online environments. This finding supports previous studies showing that trust is a key factor influencing consumer behavioral intentions toward digital and AI-based services (Habib et al., 2024). Moreover, consumer acceptance of AI technology is closely related to the belief that the system can provide useful and dependable support during interactions (Choung et al., 2023; Zhang et al., 2024)

### **The Influence of Social Presence on Purchase Intention**

The findings also indicate that social presence has a positive and significant effect on purchase intention. This result suggests that chatbot interactions that create a stronger sense of human connection can increase consumers' willingness to consider purchasing products. A higher level of social presence enables users to experience more interactive and engaging communication, which contributes to positive behavioral responses. Previous research also indicates that chatbot interactions can influence consumer attitudes and purchase intentions by improving digital service experiences (Kbaier et al., 2025)

These findings emphasize that social presence not only contributes indirectly through trust but also directly influences purchase intention by improving consumers' digital interaction experiences. Therefore, developing chatbot communication with stronger social characteristics can be an effective approach to increasing consumer engagement and purchase intention

### **The Mediating Role of Social Presence and Consumer Trust**

The mediation analysis results indicate that social presence significantly mediates the relationship between chatbot linguistic anthropomorphism and purchase intention. This finding demonstrates that human-like chatbot communication does not only influence users' perceptions during interactions but also encourages purchase intention by creating a stronger sense of social connection. The use of natural language, personal expressions, and emotional elements in chatbot conversations allows users to experience more meaningful interactions, which subsequently increase their willingness to consider purchasing products

This result supports the Stimulus-Organism-Response (S-O-R) framework, where chatbot linguistic anthropomorphism acts as an external stimulus that influences consumers'

internal psychological states through social presence before generating behavioral responses in the form of purchase intention. Therefore, social presence serves as an important mechanism explaining how human-like communication characteristics in chatbot services can influence consumer decision-making processes. This finding is also consistent with previous research showing that social presence can act as a mediator linking communication design characteristics with consumer behavioral responses (Konya-Baumbach et al., 2023)

Furthermore, the findings confirm that consumer trust significantly mediates the relationship between social presence and purchase intention. A higher level of social presence generated through chatbot interactions can strengthen consumers' confidence in the reliability and credibility of digital services. When users perceive chatbot communication as more socially engaging, they are more likely to trust the service provider, which ultimately increases their intention to purchase. This result supports previous findings that trust acts as a mediating mechanism connecting digital interaction experiences with consumer purchase decisions (Habib et al., 2024)

The serial mediation results further reveal that social presence and consumer trust sequentially mediate the relationship between chatbot linguistic anthropomorphism and purchase intention. These findings indicate that anthropomorphic chatbot communication first increases users' perception of social presence, which then develops consumer trust and ultimately leads to stronger purchase intention. This finding is consistent with previous research showing that the influence of anthropomorphism on consumer behavior occurs through sequential psychological mechanisms involving social presence and trust (Wang et al., 2025)

This sequential mechanism confirms that the effectiveness of chatbot linguistic anthropomorphism does not directly depend only on the presence of human-like features, but also on the psychological processes experienced by consumers during digital interactions. In the context of digital SME customer service, implementing chatbot communication with appropriate human-like characteristics can be an effective strategy to create more engaging interactions, build consumer trust, and encourage purchase-related behaviors.

## CONCLUSION

This study concludes that chatbot linguistic anthropomorphism plays an important role in increasing consumer purchase intention through psychological mechanisms involving social presence and consumer trust. The findings show that chatbot linguistic anthropomorphism significantly enhances social presence ( $\beta = 0.479$ ,  $t = 8.882$ ,  $p < 0.001$ ). Social presence significantly influences consumer trust ( $\beta = 0.690$ ,  $t = 11.038$ ,  $p < 0.001$ ) and purchase intention ( $\beta = 0.374$ ,  $t = 4.338$ ,  $p < 0.001$ ), while consumer trust also has a significant effect on purchase intention ( $\beta = 0.483$ ,  $t = 6.692$ ,  $p < 0.001$ )

Theoretically, this study contributes to the development of AI-based customer service and digital marketing literature by extending the Stimulus-Organism-Response (S-O-R) framework in the context of chatbot interactions. Practically, the findings provide insights for digital SMEs to design chatbot communication strategies that balance automation with human-like interaction elements in order to create more engaging and trustworthy customer experiences. Future research is expected to explore different business contexts, chatbot platforms, and additional psychological factors to provide a broader understanding of consumer responses toward AI-based communication.

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