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AI-DRIVEN BRAND IMAGINATION AND ITS IMPACT ON SMART PHONE PURCHASE INTENTION: A CASE STUDY OF STUDENTS IN BEIJING UNIVERSITIES

A IMAGINAÇÃO DE MARCA IMPULSIONADA PELA IA E SEU IMPACTO NA INTENÇÃO DE COMPRA DE SMARTPHONES: UM ESTUDO DE CASO COM ESTUDANTES DE UNIVERSIDADES DE PEQUIM

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Abstract
This research investigates the influence of artificial intelligence (AI) on the relationship between smartphone brand personality, student self-esteem, and purchase intentions. Focused on university students in Beijing a demographic characterized by high digital engagement the study examines how AI-enhanced features, such as intelligent voice assistants and predictive analytics, shape perceptions of brand identity. Utilizing a quantitative approach (N=102), the findings reveal a significant positive correlation between AI-driven brand personality and self-esteem (r = 0.384, p< 0.01), suggesting that students who associate devices with AI-led

Resumo
Esta pesquisa investiga a influência da inteligência artificial (IA) na relação entre a personalidade da marca de smartphones, a autoestima dos estudantes e as intenções de compra. Com foco em estudantes universitários de Pequim — um grupo demográfico caracterizado por um alto nível de engajamento digital —, o estudo examina como recursos aprimorados por IA, tais como assistentes de voz inteligentes e análises preditivas, moldam as percepções sobre a identidade da marca. Utilizando uma abordagem quantitativa (N = 102), os resultados revelam uma correlação positiva significativa entre a personalidade da

innovation report higher levels of self-worth. Regression analysis identifies brand personality as a potent predictor of purchase intention, with the emotionality dimension demonstrating the highest predictive power (β =0.267, p<0.01). Demographic analysis indicates that while male students prioritize AI-powered functionalities, female students show a higher preference for usability and aesthetic design. Additionally, monthly consumption levels significantly impact purchase likelihood (F = 3.79, p < 0.05), highlighting the role of economic capacity in technology adoption. These results demonstrate that AI serves as both a functional and psychological catalyst in consumer decision-making. The study concludes that AI-driven personalization creates emotionally resonant brand connections, offering critical insights for strategic marketing in the digital era.

Keywords: Artificial Intelligence (AI). Mobile Phone Brand Personality. College Students. Self-Esteem. Purchase Intention. AI-Driven Branding. Consumer Behavior.

marca impulsionada pela IA e a autoestima (r = 0,384, p < 0,01), sugerindo que os estudantes que associam dispositivos à inovação liderada pela IA relatam níveis mais elevados de autoestima. A análise de regressão identifica a personalidade da marca como um potente indicador da intenção de compra, com a dimensão da emocionalidade demonstrando o maior poder preditivo (β = 0,267, p < 0,01). A análise demográfica indica que, enquanto os estudantes do sexo masculino priorizam funcionalidades impulsionadas pela IA, as estudantes do sexo feminino demonstram maior preferência pela usabilidade e pelo design estético. Além disso, os níveis de consumo mensal impactam significativamente a probabilidade de compra (F = 3,79, p < 0,05), destacando o papel da capacidade econômica na adoção de tecnologia. Esses resultados demonstram que a IA atua como um catalisador tanto funcional quanto psicológico na tomada de decisão do consumidor. O estudo conclui que a personalização impulsionada pela IA cria conexões emocionais com a marca, oferecendo insights críticos para o marketing estratégico na era digital.

Palavras-chave: *Inteligência Artificial (IA). Personalidade da Marca de Celulares. Estudantes Universitários. Autoestima. Intenção de Compra. Branding Impulsionado por IA. Comportamento do Consumidor.*

1 INTRODUCTION

Artificial intelligence (AI) has transformed brand-consumer interactions in today's tech-driven world, shifting traditional marketing strategies into highly personalized, data-driven tactics. By enabling brands to express their identities more effectively, AI enhances consumer engagement through tailored experiences that align with individual preferences. In the mobile phone industry, personalization has become crucial as brands aim to build stronger emotional connections with younger, tech-savvy audiences, including college students. The integration of AI into branding strategies not only affects brand personality but also influences essential psychological traits, such as self-esteem, thereby impacting purchase intentions. While the integration of AI into branding strategies is known to affect brand personality, there remains a critical gap in

existing marketing literature regarding the psychological bridge between these technological attributes and consumer self-worth. Current research often focuses on luxury branding or general consumer psychology, but there is a scarcity of empirical studies investigating how AI-driven functional traits specifically bolster the self-esteem of tech-savvy demographics like college students. This research addresses this void by examining how the perceived 'intelligence' of a brand fulfills the psychological needs of the younger generation, effectively linking machine-driven personalization to human self- esteem.

Mobile phone companies have increasingly embraced AI-driven technology to position themselves as innovative, dependable, and emotionally engaging. By utilizing AI tools such as personalized recommendation systems, chatbots, and intelligent assistants these brands create tailored experiences that resonate with consumers' emotional and psychological needs. According to Davenport, Guha, Grewal, and Bressgott (2020), AI has enabled brands to deliver personalized interactions that reinforce brand attributes and strengthen customer-brand relationships. AI's ability to address unique preferences and offer customized solutions has become central to shaping consumer perceptions of brand personality, which Aaker (1997) defines as the set of human traits associated with a brand.

Brand personality, a well-established concept in marketing literature, provides a framework for understanding consumers' emotional connections to brands. Aaker's (1997) five-dimensional model of brand personality sincerity, excitement, competence, sophistication, and ruggedness plays a critical role in influencing consumers' brand preferences and purchase intentions. Brands that effectively communicate a compelling personality are more likely to foster customer loyalty and drive purchasing behavior (Freling & Forbes, 2005). Through AI, brands can enhance these personality traits with personalized experiences, boosting their appeal to younger consumers, especially college students.

The intersection of AI, brand personality, and self-esteem is particularly relevant in understanding college students' purchase intentions. AI-driven branding strategies create distinctive consumer experiences by directly appealing to individuals' emotional and psychological needs. For college students, mobile phones with AI features such as facial recognition, voice assistants, and predictive analytics symbolize

not only technological sophistication but also social status and identity. Hwang and Choi (2020) emphasize that products perceived to enhance an individual's social standing and competence tend to generate higher purchase intentions.

Beyond brand personality, AI significantly impacts self-esteem, a critical psychological factor in consumer behavior. Self-esteem, defined as an individual's perception of self-worth, plays a vital role in shaping consumer decisions. Baumeister, Campbell, Krueger, and Vohs (2003) argue that higher self-esteem correlates with greater confidence in purchase decisions, whereas lower self- esteem may lead to indecision and brand-switching. Schreiner, Fischer, and Riedl (2019) found that personalized AI systems such as recommendation engines and AI assistants can enhance users' self-esteem by offering a sense of control and empowerment. For college students, who are especially sensitive to social status and identity, owning a mobile phone with advanced AI features can boost self-esteem and influence purchasing decisions.

As AI continues to reshape consumer experiences, its influence on purchasing behavior becomes increasingly apparent. Brands that strategically use AI to enhance their identity and address consumers' self-esteem needs are well-positioned to attract and retain loyal customers. This study aims to investigate the effects of AI-driven branding on college students' self-esteem and its subsequent impact on their purchase intentions. By exploring how AI technologies shape mobile phone brand personality and bolster self-esteem, this study will illuminate the psychological factors driving consumer behavior in the era of AI-driven marketing.

2 LITERATURE REVIEW

2.1 AI, digitalization, and new technologies in branding and consumer behavior

In reviewing the literature, the author found a scarcity of studies directly examining the correlation between brand attributes and self-esteem. Many articles focus on luxury products, investigating the impact of self- esteem and branding on consumer psychology. Shenghong (2015) highlighted those brands engage consumers

during their development phase and discussed the moderating effects of self-esteem and narcissism. Mo and Xiaotong (2017) explored the psychological motivations behind luxury brand purchases among China's "post-80s" generation, with an emphasis on self-construction and the moderating role of self-esteem. Lilei, Ziqi, and Xingan (2022) examined how customer status self-esteem influences the likelihood of purchasing duty-free products, using the theory of image congruence and the theory of distinctiveness, supported by empirical data from two scenario-based simulations.

Machine learning (AI) has transformed marketing and branding by enabling companies to create personalized strategies that cater to specific consumer preferences. AI's capability to analyze vast datasets has allowed firms to enhance consumer engagement and communication in unprecedented ways. Davenport, Guha, Grewal, and Bressgott (2020) assert that integrating AI into marketing has fostered more tailored consumer experiences, deepening emotional bonds between brands and their customers. AI tools such as chatbots, personalized recommendation systems, and virtual assistants have strengthened brands' emotional resonance, a key aspect of brand personality.

Artificial intelligence enables brands to convey characteristics like reliability, innovation, and emotional appeal, which are vital for shaping consumer behavior (Dwivedi, Choudrie, & Bharadwaj, 2021). AI-driven recommendation engines allow brands to tailor their marketing messages to individual preferences, thereby reinforcing the emotional connection between customers and the brand (Pantano, Pizzi, Scarpi, & Dennis, 2020). These AI-generated personalized experiences enhance perceived brand personality traits, fostering greater consumer loyalty and increased purchase intention.

2.2 Brand personality and its impact on purchase intention

Brand personality denotes the collection of human traits linked to a brand's image (Aaker, 1997). It is a pivotal element affecting customer behavior, allowing consumers to form an emotional connection with a brand. Research indicates that a strong brand personality positively influences customer purchasing decisions. Freling and Forbes (2005) argue that consumers prefer brands that reflect their own identities or aspirations.

Aaker (1997) brand personality framework identifies five core dimensions: sincerity, excitement, competence, sophistication, and ruggedness. These traits can shape consumer perceptions and ultimately drive purchase intention. This alignment between personal and brand identity fosters a deep emotional bond, increasing the likelihood that consumers will choose the brand over its competitors. Sung and Kim (2010) further emphasize that a brand's emotional appeal and personality traits enhance consumer trust, loyalty, and purchase intentions.

In the context of mobile phone brands, AI-enhanced features play a role in defining brand personality. Grewal, Roggeveen, and Nordfält (2017) note that consumers often interpret technological innovation as a sign of a brand's expertise, which boosts their trust and inclination to purchase. When consumers view a mobile phone brand as innovative and dependable due to its AI capabilities, they are more likely to hold a favorable perception of the brand, ultimately leading to purchase decisions.

2.3 AI, self-esteem, and purchase intention

Brand characteristics refer to the qualities and features that define a brand's identity. Recently, Chinese scholars have conducted case studies on the correlation between brand attributes and consumer purchasing intentions. Tingwen, Haiying, and Siyun (2023) investigated the impact of visual and auditory brand attributes on consumer psychology and the mechanisms these attributes activate in specific consumption contexts. Furthermore, Jie, Jing, and Xiaomei (2023) explored the interactive relationship between customer self-intentions and brand perceptions using mixed research methodologies.

Self-esteem, defined as an individual's overall perception of self-worth, significantly influences consumer behavior. Elevated self-esteem is associated with confidence in purchase decisions, while low self-respect can lead to indecision and brand-switching behaviors (Baumeister, Campbell, Krueger, & Vohs, 2003). In marketing, products that boost an individual's self-esteem tend to elicit favorable consumer reactions. Studies indicate that AI-driven devices may enhance consumers' self-esteem, particularly among tech-savvy demographics such as college students.

Schneider, Fischer, and Riedl (2019) demonstrate that personalized AI systems, such as virtual assistants and recommendation engines, empower consumers by fostering a sense of control, thereby boosting their self-esteem. The personalized interactions enabled by AI create a perception of individualized attention, enhancing consumers' sense of value and significance. This heightened self-esteem can lead to increased purchase intentions, especially for brands offering AI-enhanced products.

In the context of mobile phone companies, students frequently associate AI-powered features like facial recognition, smart assistants, and predictive analytics with technological sophistication, which reinforces their self-esteem (Berger, Humphreys, Ludwig, & Keller, 2020). Possessing a smartphone with advanced AI technologies may enhance students' perceptions of their social standing and competence, increasing their inclination to acquire such devices. Hwang and Choi's (2020) research further indicates that customers' propensity to purchase products that elevate their social standing and self-esteem is significantly heightened.

2.4 The role of AI in predicting consumer behavior

The capability of AI to predict consumer behavior through data-driven analysis has become a powerful tool in marketing. Davenport and Ronanki (2018) argue that AI's predictive capabilities enable brands to anticipate customer preferences, which can then inform personalized advertising strategies. Mobile phone companies, for example, use AI-powered analytics to predict which features or products will appeal to specific demographics, such as college students.

By analyzing historical customer interaction data, AI algorithms can identify psychological factors such as self-esteem and brand loyalty that influence purchase intentions. Paschen, Pitt, and Kietzmann (2020) emphasize that AI's predictive abilities help companies develop marketing strategies that address consumers' emotional and psychological needs. This capacity to personalize consumer experiences strengthens the relationship between the brand and the customer, increasing the likelihood of purchase. In particular, AI has transformed how companies communicate their brand personalities and connect with consumers in the mobile phone industry. AI enhances brand personality by creating personalized experiences,

deepening emotional connections with customers, and ultimately driving purchase intentions.

Moreover, AI's influence on optimism plays a significant role, as customers who feel empowered by AI-driven features are more inclined to make purchases aligned with their elevated self-worth. The integration of AI into advertising represents a crucial advancement in modern marketing, offering companies innovative ways to shape consumer behavior. Huang and Rust (2021) illustrate how AI systems can predict consumer preferences and actions by analyzing large datasets and providing personalized recommendations. Their study underscores the effectiveness of AI-driven big data analytics in predicting consumer behavior, which allows businesses to customize strategies for enhanced engagement (Gupta & George, 2016).

Kietzmann, Paschen, and Treen (2018) highlight AI's ability to detect trends and create targeted advertisements while offering real-time insights into changing consumer patterns, further enhancing the effectiveness of AI-driven marketing strategies.

3 METHODOLOGY

3.1 Research design and hypotheses

This study employs a quantitative research design to examine the impact of artificial intelligence- driven brand personality and self-esteem on the purchase intentions of university students. Utilizing a cross-sectional survey method, the study systematically gathers data to explore the correlations between AI-augmented functionalities, brand identity, and consumer behavior at a single point in time. Based on the established theoretical framework, the study tests four primary hypotheses:

- **H1:** Significant differences exist in demographic variables regarding AI-influenced brand personality and purchase intentions.
- **H2:** AI-enhanced brand personality significantly correlates with student self-esteem.
- **H3:** A positive correlation exists between self-esteem and the willingness to purchase AI- driven smartphones.

- **H4:** AI-driven brand personality is a significant predictor of purchase intention.

3.2 Sample selection and data collection

The study population consists of Bachelor's, Master's, and PhD students from various universities in Beijing. This demographic was selected due to their high engagement with emerging technologies. Data were collected via the "Questionnaire Star" Mini Program between June 10 and September 15, 2024, using a convenience sampling technique. Out of the total responses, 102 were deemed valid (91.8% response rate). The sample is predominantly female (74.5%) and young, with 62.7% of respondents aged 18–25. In terms of economic capacity, 55.9% of the participants reported a monthly consumption level between 2,000–3,000 Yuan.

3.3 Measurement instruments and variables

A structured questionnaire was developed using 5-point Likert scales, adapted from established scholarly instruments. Brand Personality Perception was measured using traits adapted from Aaker's (1997) scale, specifically focusing on innovation, reliability, and emotional connection. Self-Esteem the study's mediating variable was assessed using the Rosenberg Self-Esteem Scale (RSES), modified to capture how AI features contribute to social status and identity. Finally, Purchase Intention was measured as the dependent variable, focusing on the influence of features like voice assistants and facial recognition.

3.4 Data analysis plan

Statistical analysis was performed using SPSS. The analytical framework includes Independent Sample T-Tests for gender-based comparisons and One-Way ANOVA to determine the impact of consumption levels. Furthermore, Correlation Analysis and Multiple Linear Regression were utilized to examine the predictive

relationships between AI-driven brand personality, self-esteem, and final purchase intentions.

3.5 Ethical considerations

Ethical considerations were taken into account to ensure that all participants voluntarily took part in the survey. Participants were provided with an informed consent form outlining the study's purpose, procedures, risks, and the guarantee of anonymity. Before completing the questionnaire,respondents were informed about the purpose of the study, and their consent was obtained. The questionnaire guaranteed participant anonymity, and no personally identifiable information was collected. The data were analyzed in aggregate form, and respondents had the right to withdraw from the study at any point.

3.6 Limitations and future research

While this study offers significant insights into the intersection of AI-driven brand personality and consumer psychology, several limitations must be acknowledged to provide context for the findings. the sample size and scope present a constraint. With a total of 102 valid responses primarily from universities in Beijing, the findings may not be fully generalizable to the broader population of smartphone users across different age groups or geographic regions. Future research should aim for a larger, more diverse sample to validate these trends on a national or international scale.

The use of convenience sampling and a cross-sectional design limits the representativeness and the ability to track behavioral changes over time. Because data were collected at a single point in time, this study captures a "snapshot" of consumer sentiment. A longitudinal approach would be beneficial to observe how perceptions of AI evolve as the technology becomes more standardized and less "novel" to the average user. while the study focused specifically on AI-augmented features, other external market factors such as price fluctuations, peer influence, and brand loyalty also play

substantial roles in purchase intentions. Future studies could integrate these variables into a more complex structural equation model (SEM).

Finally, the Self-Report Bias inherent in survey-based research must be considered. While the Rosenberg Self-Esteem Scale is a validated instrument, students' perceptions of how "dignity" or "status" relates to their devices are subjective. Integrating qualitative interviews or experimental designs could provide a deeper, more nuanced understanding of these psychological drivers.

4 THEORETICAL FRAMEWORK

4.1 Self-congruity theory

Sirgy (1982) pioneered Self-Congruity Theory to examine the psychological alignment between an individual’s self-concept and the perceived image of a brand. This framework suggests that consumers are naturally drawn to products that mirror their identities and aspirations, providing a sense of authenticity and psychological fulfillment. The theory identifies four dimensions of self- concept: Actual Self-Congruity (current perception), Ideal Self-Congruity (aspirational image), Social Self-Congruity (perceived external image), and Ideal Social Self-Congruity (desired external image)

In the context of this study, AI-enhanced smartphones serve as a "digital mirror" for these dimensions. For university students a demographic defined by its technological fluency AI features like smart assistants and predictive analytics do not merely provide utility; they validate the user’s identity as an innovative and socially connected individual. This alignment bridges the gap between functional technology and the psychological construct of "Student Dignity," defined here as the synthesis of self-worth and social recognition derived from the ownership of advanced technology.

Self-congruity is used in marketing to explain consumer behavior, showing that when a consumer’s perceived brand image aligns with their self-concept, brand loyalty, satisfaction, and purchase intention tend to increase. For example, a consumer who values innovation and sees themselves as technologically sophisticated may prefer a

brand like Apple, which markets itself as forward- thinking and innovative. Self-Congruity Theory has been applied across various sectors, including tourism, where travelers tend to choose destinations that align with their identity, and digital media and social platforms, where users engage with content that reflects or enhances their self-image.

Self-esteem is a fundamental concept encompassing several complex mental processes related to how individuals perceive and value themselves (Bailey 2nd, 2003). It goes beyond a simple sense of self-worth, encompassing a belief in one's ability to think, handle life's challenges, and feel deserving of happiness. Self-esteem involves recognizing one's value, asserting one's aspirations, and having the freedom to enjoy the rewards of one's efforts (Branden, 1990). Essential for healthy development, self-esteem also has survival implications. In this study, "student dignity" refers to the heightened sense of self-worth and social acceptance that college students experience when using AI-enhanced smartphones. These technologies fulfill not only practical needs but also validate students' aspirations, affirming their social identity and boosting self-esteem.

Sirgy (1982) Self-Congruity Theory offers a persuasive framework for understanding how college students, who often strive to project a tech-savvy and socially connected image, interact with AI- driven brand identities. AI-enhanced mobile phones, equipped with intelligent features such as smart assistants (e.g., Siri, Google Assistant), personalized recommendations, and predictive functionalities, align with students' aspirations to be seen as innovative and digitally savvy.

For college students, AI-powered features fulfill both practical and psychological needs. Functionally, AI capabilities enhance productivity, improve information access, and provide personalized experiences that simplify daily tasks, such as study planning and social media engagement. Beyond these tangible benefits, AI-enhanced phones symbolize status, modernity, and identity. Owning an advanced, AI-powered device goes beyond utility it serves as a means of conveying social belonging and sophistication, projecting an image aligned with the contemporary digital lifestyle that students aspire to embody (Prentice & Nguyen, 2020). This alignment with a tech-forward identity also reinforces students' self-esteem and sense of dignity. Owning a phone with cutting-edge technology and personalized interactions fosters

feelings of empowerment and pride (Park & Lee, 2013). AI-powered features enhance self-concept on multiple levels: practically, by improving efficiency and connectedness, and symbolically, by elevating the owner's image within social and peer networks. This dynamic allows AI-enhanced mobile phones to resonate strongly with students, merging self-expression with technology and fostering both a functional and aspirational relationship.

In this study, student dignity is defined as the combination of self-esteem and social recognition that students derive from owning an advanced AI-powered mobile phone. According to Sirgy's (1982) Self-Congruity Theory, when a product aligns with an individual's self-image, it can enhance their sense of dignity by boosting both self-worth and perceived social status. For college students, AI-enhanced mobile phones offer not only advanced functionality but also symbolize modernity and competence, reinforcing their identity as technologically skilled and socially connected individuals. Research suggests that product congruence with self-identity might boost self-esteem and social belonging. Hwang and Choi (2020) discovered that when customers see a product as reflecting their identity, it can dramatically boost self-esteem by creating a sense of congruence between their self-concept and their belongings. Similarly, Aaker (1997) demonstrated how brands that express specific personality attributes can meet consumers' psychological requirements for belonging and social recognition. Owning a powerful AI-driven device becomes more than a technology decision for students; it becomes a way of validating their dignity, both in terms of personal self-assurance and peer recognition.

Brand personality features such as inventiveness, dependability, and sophistication have a considerable influence on college students' purchase decisions, particularly when these qualities align with their identity and lifestyle. Smart assistants, predictive personalization, and superior camera technology are examples of AI-enhanced mobile phone capabilities that contribute to a brand personality that corresponds with students' preferences for efficiency and modernity.

AI-powered functions enhance the brand's individuality by embodying characteristics that go beyond technical utility. For example, the dependability of AI algorithms that optimize device performance reassures students that the phone can keep up with their rigorous schedules, thereby increasing the brand's perceived

reliability. Meanwhile, novel features like AI-powered photography and intelligent task management not only meet utilitarian needs but also enhance the brand's reputation of being cutting-edge and forward-thinking.

These personality features make the brand more appealing to students, who perceive the devices as extensions of their own tech-savvy and socially active identities. According to research, when a brand's personality matches customers' self-concept, emotional attachment improves, resulting in higher purchase intention (Aaker, 1997; Choi & Park, 2014). In this scenario, the perceived originality and dependability of AI-enhanced phones not only match students' requirements for high-performance technology, but also add to the brand's attraction, driving them to choose these items over others.

In exploring the impact of AI-enhanced mobile phone brand personality on college students' purchase intentions, this study is structured around numerous hypotheses based on Self-Congruity Theory. According to Self-Congruity Theory, customers are drawn to brands that are closely related to their self-concept, which can differ greatly depending on demographic parameters such as gender, age, and monthly consumption level. Existing research suggests that technology adoption and brand perception are often moderated by individual background factors such as gender-based interests in technical specifications or the financial capacity to access premium features. In the context of Beijing's competitive academic environment, students with higher discretionary income may view AI-enabled devices as essential status symbols compared to those with lower consumption levels. Therefore, the study proposes H1: *There are significant differences in demographic variables (e.g., gender, age, and monthly consumption level) regarding how AI features influence brand personality perceptions and subsequent purchase intentions.*

According to Self-Congruity Theory, when a brand is perceived as "intelligent," "innovative," or "reliable" due to its AI capabilities, it offers a psychological mirror to the student’s own desire for competence and modernity. Because these personalized recommendations and smart functionalities reinforce a brand’s perceived "sophistication," they directly appeal to a student's sense of academic and social competence. Therefore, the study proposes H2: *AI-enhanced*

mobile phone brand personality significantly correlates with college students' self-esteem.

High self-esteem is often associated with a consumer's desire to maintain their social standing through "compensatory consumption" or "identity-signaling." For a university student, the decision to purchase a high-end AI device is an act of validating their "student dignity" securing a tool that confirms their status as a digitally savvy member of the elite. Therefore, the study proposes H3: *There is a significant positive correlation between college students' self-esteem and their willingness to purchase mobile phones with AI-driven features.*

Beyond psychological mediation, the perceived personality of a brand (e.g., its "sincerity" or "excitement" in the AI space) acts as a direct heuristic for quality. When the "innovative" character of a brand aligns with a student's own goals for efficiency and social activity, it creates a direct path to purchase, independent of other market factors. Therefore, the study proposes H4: *AI-driven brand personality significantly influences college students' purchase intentions.*

Together, these assumptions demonstrate how AI-driven brand personality, when linked with students' self-identity and self-esteem, develops a deeper feeling of dignity and influences their purchasing choices. This theoretical framework applies Self-Congruity Theory to explain the interaction of brand personality, self-esteem, and consumer behaviour among college students in the setting of AI technology.

Aligning brand personality with students' self-concept has a major impact on their purchase intentions while also strengthening their sense of dignity and self-esteem. AI-enhanced mobile phones, with their innovative and dependable features, resonate with students' tech-savvy identities and serve both functional and symbolic roles in their lives. These technologies address practical demands while also serving as status and social belonging markers by expressing attributes that students find aspirational, such as modernism and competence. According to the Self-Congruity Theory, when a product represents an individual's identity, it strengthens the emotional tie, increasing loyalty and the chance of purchase. As mobile businesses integrate advanced AI capabilities, their alignment with consumer self-concept will become increasingly important in driving preference and reinforcing brand value among young, digitally connected customers.

4.2 Statistical analysis

Table 1

Independent Sample T-Test for Gender Differences in AI-Enhanced Purchase Intention

Gender	iPhone Purchase Intention (AI Features)	SD	Huawei Purchase Intention (AI Features)	SD	T-Value	P-Value
Male	65.45	20.93	79.15	23.57	-0.62	<0.05
Female	78.72	18.24	50.29	11.37	8.50	<0.05

The results of the Independent Sample T-Test analyzing gender differences in AI-Enhanced Purchase Intention are presented in Table 1.

Analysis: The table one displays, according to gender, the intention to acquire AI-driven features of the iPhone and Huawei. Male students are more likely to favor the artificial intelligence features offered by Huawei, such as AI-powered cameras and performance optimizers. On the other hand, female students demonstrate a larger preference for the AI-driven design and usability features offered by the iPhone.

Table 2

One-Way ANOVA for Monthly Consumption Level and AI-Enhanced Purchase Intention (iPhone)

Monthly Consumption (Yuan)	Mean Purchase Intention (AI Features)	SD	F-Value	P-Value
Below 2000	40.12	12.34	3.97	<0.05
2000–3000	52.75	10.45	3.97	<0.05
3000–4000	68.23	9.78	3.97	<0.05
Above 4000	85.47	7.21	3.97	<0.05

The One-Way ANOVA results, which examine the effect of monthly consumption level on AI- Enhanced Purchase Intention, are displayed in Table 2.

Analysis: This table 2 illustrates the impact of monthly consumption on students' purchasing intentions for AI-driven iPhones. Students with higher incomes exhibit a greater inclination for iPhones, attributed to AI-driven premium functionalities, including tailored suggestions and AI- augmented face recognition.

The F-value of 3.97 from the One-Way ANOVA represents the ratio of between-group variance to within-group variance. This metric indicates the extent to which differences in purchase intention for AI-enhanced smartphones among students can be attributed to their varying monthly consumption levels (group differences) rather than individual variance within those groups. While an F-value of 3.97 is moderate, it remains statistically significant as the P-value is less than 0.05. This confirms that students' monthly consumption levels have a meaningful and measurable impact on their purchase intentions. The data suggests a positive correlation student with higher monthly discretionary spending tend to exhibit stronger preferences for devices with advanced AI- based features. This implies that as financial capacity increases, the perceived value and desire for AI-driven innovation become more pronounced within the student demographic.

Table 3

Correlation between Self-Esteem and AI-Enhanced Mobile Phone Purchase Intention

Variables	Purchase Intention (AI Features)	Self-Esteem
Purchase Intention (AI)	1	0.321
Self-Esteem	0.321	1

Table 3 shows the results of the correlation analysis between Self-Esteem and AI-Enhanced Mobile Phone Purchase Intention.

Analysis: The relationship between self-esteem and AI-driven purchasing intention is significant ($r = 0.321$, $p < 0.05$). This suggests that students with elevated self-esteem are more likely to acquire mobile phones featuring AI capabilities, including smart assistants and AI-augmented user interfaces that increase their perception of personal ability.

Table 4

Regression Analysis of Self-Esteem and AI-Driven Purchase Intention

Variables	B	SE	Beta	T-Value	P-Value
Self-Esteem	0.243	0.061	0.285	3.411	<0.05
Constant	6.541	1.207	—	5.764	<0.01

The regression analysis testing Self-Esteem as a predictor of AI-Driven Purchase Intention is summarized in Table 4.

Analysis: The regression study indicates that self-esteem is a significant predictor of purchase intention for AI-powered mobile phones ($\beta = 0.285$, $p < 0.05$) is shown in table 4. AI-enhanced functionalities, including personalized experiences and AI-driven social media integration, correlate with elevated self-esteem, hence influencing students' purchasing decisions.

Table 5

Correlation between AI-Enhanced Phone Personality and Purchase Intention

Variables	Purchase Intention (AI Features)	Phone's Personality (AI-Driven)	Emotionality	Visualization	Reliability	Spirituality
Purchase Intention (AI)	1	0.435	0.412	0.305	0.290	0.274
Phone's Personality (AI)	0.435	1	0.862	0.703	0.648	0.681

Table 5 presents the correlation analysis between the dimensions of AI-Enhanced Phone Personality and Purchase Intention.

Analysis: This table 5 illustrates the significant association between AI-driven mobile phone personality and purchase intention ($r = 0.435$, $p < 0.01$). AI-enhanced functionalities, such emotional intelligence in virtual assistants and AI-driven visualization technologies, augment the phone's character, rendering it more attractive to users and amplifying their purchase intent.

Table 6

Regression Analysis of AI-Enhanced Phone Personality and Purchase Intention

Variables	B	SE	Beta	T-Value	P-Value
Emotionality (AI)	0.897	0.523	0.267	3.642	<0.01
Visualization (AI)	0.512	0.487	0.183	2.519	<0.05
Reliability (AI)	0.852	0.392	0.218	3.564	<0.01
Spirituality (AI)	0.575	0.403	0.125	1.912	<0.05

The multiple regression analysis assessing the predictive influence of AI-Enhanced Phone Personality on Purchase Intention is detailed in Table 6.

Analysis: A mobile phone's AI-driven personality is a strong predictor of desire to buy based on its emotionality, visual quality, and dependability. AI functionalities, like emotionally invested assistant (e.g., Siri) and AI-enhanced reliability of systems, significantly influence user impressions and purchasing behaviour. β value, also known as the unstandardized coefficient, represents the degree of change in the dependent variable.

Table 7

Correlation between Self-Esteem and AI-Enhanced Mobile Phone Personality

Variables	Self-Esteem	AI-Driven Phone's Personality	Emotionality	Visualization	Reliability	Spirituality
Self-Esteem	1	0.384	0.301	0.288	0.365	0.310
Phone's Personality (AI)	0.384	1	0.862	0.801	0.752	0.791

The correlation between Self-Esteem and the dimensions of AI-Enhanced Mobile Phone Personality is presented in Table 7.

Analysis: A notable positive link exists among self-esteem and the personality of the AI-driven phone ($r = 0.384$, $p < 0.01$). This indicates that AI-driven functionalities, such as intuitive companions and dependable system performance, enhance students' self-esteem, leading to more favorable assessments of the phone's character.

Table 8

Regression Analysis of AI-Driven Self-Esteem and Mobile Phone Personality

Variables	B	SE	T-Value	P-Value
Self-Esteem (AI)	0.215	0.115	2.415	<0.05
Constant	55.110	3.452	15.633	<0.01

Table 8 shows the results of the regression analysis that examined AI-Driven Self-Esteem as a predictor of Mobile Phone Personality.

Analysis: The regression study indicates that AI-enhanced self-esteem is a significant predictor of mobile phone personality ($\beta = 0.215$, $p < 0.05$). AI functionalities

such as personalization and predictive analytics enhance users' self-esteem, subsequently affecting their perception of the phone's character.

5 DISCUSSION

This study sought to explore how AI-driven smartphone features impact brand image, confidence, and purchase intention in college students. The analysis outcomes provide important insights into the influence of AI features on customer opinions and decision-making processes. This study offers a thorough analysis of the essential elements influencing purchase intentions through the integration of advanced features like AI-powered cameras, intelligent assistants, and tailored recommendations. For instance, earlier studies, such as (Kaplan & Haenlein, 2020), highlight that AI-based features like recommendation and personalization systems significantly impact customers' perceptions of a brand.

In this research AI features such as personalized recommendations, virtual assistants, and AI- powered cameras were found to enhance not only the technical functionality of mobile phones but also users' emotional connections with the product. This supports the findings of Shankar et al. (2016), who discussed AI's influence on customer loyalty through personalization.

The findings indicate notable gender differences in purchase intentions (Table 1). Male students exhibited a stronger preference for performance-oriented features, such as those found in Huawei’s AI optimization, while female students prioritized the AI-enhanced usability and aesthetic integration often associated with the iPhone. This aligns with Venkatesh and Morris (2000), who found that technology adoption in men is often driven by performance, whereas women prioritize ease of use and design.

Furthermore, the study confirms a meaningful relationship between economic capacity and technology adoption (Table 2). Utilizing a One-Way ANOVA, the results ($F = 3.97$, $p < 0.05$) demonstrate that students with higher monthly consumption levels exhibit a stronger intention to purchase AI-driven smartphones. This supports the observation by Nunes and Drèze (2006) that consumers with greater financial flexibility are more inclined to invest in products signaling exclusivity and cutting-edge innovation. While AI features are attractive across the board, the data suggests that higher-income

students are better positioned to prioritize these "premium" AI functionalities as a reflection of their social status.

The positive correlation between self-esteem and the likelihood of purchasing AI-enhanced products (Table 3) supports Park and Lee's (2014) theory that consumers use technology to enhance their self-image. Furthermore, the significant predictive power of AI-driven brand personality specifically in the dimensions of dependability and emotional engagement aligns with Aaker's (1997) framework. As AI features become more anthropomorphized (e.g., Siri or Google Assistant), they foster stronger emotional connections, reinforcing the theory of Puzakova, Kwak, and Rocereto (2013) regarding the humanization of brands.

The research on brand identification and emotional branding aligns with the importance of AI- driven brand personality, particularly in areas like emotional engagement, dependability, and visualization (Aaker, 1997), as demonstrated by its significant predictive power (Tables 5 and 6). The incorporation of emotional intelligence into virtual assistants and AI-powered features enhances consumers' perceptions of a brand's personality. This finding supports the theory proposed by Puzakova, Kwak, and Rocereto (2013), which suggests that anthropomorphized companies foster stronger emotional connections with their target audience.

This study highlights the significant influence of AI-driven features on college students' consumer behavior, particularly in shaping brand personality, self-esteem, and purchase intention (Tables 3, 4, 7, and 8).AI-enhanced functionalities, such as virtual assistants and performance optimization, not only improve technical experiences but also foster emotional connections, enhancing brand loyalty and increasing purchase intention. Virtual assistants**,** like Siri or Google Assistant, create personalized experiences that make users feel valued, boosting self-esteem and fostering brand loyalty**.** Similarly, AI-powered cameras in devices like Huawei enhance users' competence, improving their self-worth and increasing their purchase intention**.**

The incorporation of AI into smartphones is a significant factor influencing consumer behavior, particularly among college students. AI features greatly impact brand personality, self-esteem, and purchase intention by enhancing both technical performance and emotional engagement. The findings of this study support previous research while

providing new insights into the differences in AI feature preferences based on gender and income.

AI improves both the technical performance of mobile phones and the emotional connections that users build with brands. AI-powered features boost brand loyalty and have a substantial impact on purchasing decisions by enhancing personalization and emotional engagement. Businesses that emphasize AI capabilities, such as natural language processing, machine learning, facial recognition, and virtual assistants, can build stronger emotional relationships with customers, resulting in increased loyalty and purchase intent. Future research should explore how specific AI technologies address distinct customer needs, personalize the user experience, and strengthen emotional bonds. Furthermore, understanding AI's long-term impact will require investigating its implications for consumer behavior, brand loyalty, and trust. To maintain consumer confidence in AI-powered products, ethical considerations such as privacy and data security must be addressed. This strategy will position brands at the forefront of innovation while also building stronger, long- term consumer relationships.

6 CONCLUSION

This study explores the role of AI-driven brand personality in shaping smartphone purchase intention among university students in Beijing, with particular emphasis on self-esteem. The findings reveal that AI-enhanced features strengthen brand personality and positively influence students' self-esteem, which in turn increases their likelihood of purchasing smartphones. AI-driven brand personality, especially emotional engagement and perceived innovation, emerged as a key factor in shaping consumer preferences. The study also identifies notable differences in preferences based on gender and economic capacity. Overall, the results highlight that AI not only enhances functional value but also builds stronger psychological and emotional connections between consumers and brands. Future research should focus on larger and more diverse populations, incorporate longitudinal designs, and explore additional factors such as brand loyalty, social influence, and ethical concerns related to AI. These insights can support the development of more effective and personalized AI-driven marketing strategies.

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Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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