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Research Article

Gender and perception of reality in AI influencers: Digital gender in the trace of simulacra

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ABSTRACT

The use of artificial intelligence (AI) and the emergence of AI-generated virtual influencers have made it necessary to examine their effects on societal dynamics, particularly in the daily lives of young people. This study focuses on the representation of gender in AI virtual influencers and their impact on perceptions of reality, aiming to identify the expectations of generation Z (Gen Z) university students in Turkey regarding AI influencers. The data obtained in the study were analyzed through logistic regression. The results of a survey conducted with 406 university students in Eskisehir revealed that members of Gen Z prefer a more inclusive understanding of AI influencers rather than a gender-based approach. The findings indicate that AI influencers are not strongly associated with traditional gender roles. This study demonstrates that the representations of AI influencers blur the boundaries between reality and simulation, resonating with Baudrillard's (1994) concept of simulacra. Gen Z possesses an evolving perspective on gender norms and prefers a more inclusive representation within AI influencer culture.

Keywords: AI influencers, gender equality, simulacra and simulation, hyperreality, digital platforms

INTRODUCTION

The digital age and social media platforms have profoundly influenced the ways people communicate, interact, and access information. Generation Z (Gen Z), born between 1995 and 2010, has grown up in a world dominated by digital technology, the internet, and computerization, developing a distinctive perspective in understanding their lifestyles, habits, and surroundings (Mamedov & Solunina, 2024; Wibawa et al., 2022). This transformation has been reinforced by the interaction opportunities offered by social media, paving the way for the emergence of new digital actors such as artificial intelligence (AI) influencers—also known as virtual influencers.

Digital influencers, composed of algorithms, interact with followers in ways similar to real humans, not only strengthening their perception of reality but also continuously challenging it. Digital characters, with hyper-realistic or anime-inspired designs, blur the lines between the real and the virtual, becoming an integral part of the simulation universe (Arsenyan & Mirowska, 2021). Consequently, in recent years, the impact of AI

influencers on gender representations has become an increasingly debated topic. The visual and narrative content provided by AI influencers is not limited to aesthetics or consumerism but also plays a critical role in reconstructing gender roles, cultural codes, and norms. This study, specific to Turkey and aimed at uncovering the expectations of university students regarding AI influencers, seeks to contribute to the global discourse on these complex interactions by highlighting local dynamics. Furthermore, it aims to promote a more inclusive and equitable construction of gender equality.

Despite the growing body of research on AI influencers, the existing literature has paid insufficient attention to how gender representations in algorithmically constructed digital personas interact with evolving societal norms, particularly within non-Western cultural contexts. Most prior studies have concentrated on Western audiences or examined virtual influencers primarily through the lens of consumer behavior and brand engagement (Arsenyan & Mirowska, 2021; Ma & Li, 2024), leaving a significant gap in understanding how gender identity is perceived and negotiated in AI influencer culture across different cultural settings. This study addresses that gap by examining gender-based character representation among Gen Z in Turkey—a context shaped by a distinctive intersection of modernizing gender norms, conservative social traditions, and rapidly expanding digital media consumption. Investigating gender representations in this specific context is important because media figures, including AI-generated ones, do not merely reflect prevailing cultural values; they actively reproduce and contest them (Baudrillard, 2014; Butler, 1999). As AI influencers gain increasing visibility on Turkish social media platforms, their role in shaping gender perceptions among young audiences warrants critical academic attention. Theoretically, this study contributes to the application of Baudrillard's (1994) simulacra framework and Butler's (1999) performative gender theory to the underexplored domain of AI-generated digital identities. Practically, it offers insights relevant to media literacy education, platform governance, and the ethical design of AI personas. Moreover, the finding that participants do not associate AI influencers strongly with traditional gender categories is not merely a null result—it is itself a substantive contribution. Such a finding may reflect the emergence of new, more fluid gender sensibilities among Gen Z, shaped by their immersion in digital environments that increasingly decouple identity from biological or social binaries. It may also point to the simulacral nature of AI influencers themselves: as entities without fixed embodied identities, they may invite projections that transcend conventional gender frameworks. Understanding why gender-based distinctions appear less salient in this context—whether due to cultural shifts, generational change, or the unique ontological status of AI personas—is therefore as analytically significant as documenting their presence.

BACKGROUND

Simulacra and Simulation: Illusions in the Shadow of Reality

Baudrillard (2014) suggests that the ever-evolving world is constantly being reshaped through technological innovations. Within the realm of simulation, reality is altered and separated from its spatial dimensions. The boundaries between the real and the artificial, as well as the real and the imaginary, become so faint that they are nearly imperceptible. In this universe, traditional categories such as true and false lose their significance, merging the real with the fictional, as well as production with reproduction. This blurred ambiguity transforms into a new reality experienced by individuals. Baudrillard (2014) refers to this blend as the concept of "simulacrum" (Christanti et al., 2021).

To clarify the concept further: a simulacrum, in Baudrillard's (1994) framework, is not simply a copy or imitation of something real, but a representation that has lost its original referent entirely—a sign that no longer points to any underlying reality. Baudrillard (2014) describes four successive stages in the life of a representation: first, it faithfully reflects a basic reality; second, it masks and distorts that reality; third, it masks the absence of a basic reality; and finally, in its purest simulacral form, it bears no relation to any reality whatsoever, becoming its own pure simulacrum. AI influencers exemplify this final stage most vividly: they are digital constructs that present themselves as real social actors, accumulating followers, generating emotional engagement, and shaping consumer behavior—all without any underlying human referent. In this sense, their "reality" is entirely self-produced and self-referential, a hyperreality that has superseded the real.

AI influencers stand out as some of the most striking examples of simulacra. Although they are not real people, their presence and influence are undeniably real. These AI influencers embody hyperrealities—entities that are not genuinely real but behave as if they are. For instance, a study investigating the perception of trust in human vs. virtual influencers found that 50% of participants believed influencer content was created by a human, even when it was computer-generated (Hofeditz et al., 2022). The study also emphasized that virtual influencers have achieved such a high level of anthropomorphism that they have become indistinguishable from real humans (Hofeditz et al., 2022).

Additionally, research exploring the influence of virtual influencers on branding revealed that participants tended to form stronger parasocial interactions and perceive higher anthropomorphism when interacting with virtual influencers possessing more human-like appearances. These perceptions resulted in more favorable attitudes toward brands and increased purchase intentions (Ma & Li, 2024).

An analysis of Instagram posts by Alara X, Turkey's first AI influencer, and the comments of her followers showed that she maintained a predominantly positive relationship with her audience. Her posts were carefully crafted to build a solid sense of reality, ensuring that she was not perceived as unsettling or artificial (Doğan Erdinç & Uzunçarşılı Soydaş, 2024).

AI influencers, when examined within the framework of Baudrillard's (1994) concept of the simulacrum, emerge as digital figures that operate through a hyper-realistic logic of representation, constructing idealized lifestyle imagery and an illusion of authenticity (Demir Demiralp, 2025). These figures are strategically positioned through advertising practices in ways that draw direct parallels with real human influencers, while their modes of relational engagement with users are systematically fabricated through the simulation of social interaction (Demir Demiralp, 2025). In this context, the emotional expressions displayed by virtual influencers constitute a decisive variable that directly shapes users' experiences of perceived authenticity and presence. Research indicates that interactions with virtual influencers simultaneously activate both cognitive and affective empathy, with the nature of this relationship varying according to the type of emotion expressed. Specifically, positive emotional displays such as happiness and excitement have been found to reinforce empathic responses, whereas intense negative emotional expressions such as anger tend to attenuate them. The emotional expression repertoire of virtual influencers thus functions as a critical mechanism through which users are able to establish meaningful and sustainable connections with these digitally constructed figures (Kim & Park, 2024). In light of these developments, Butler's (1999) concept of performative gender leads us to question whether gender itself is a construct that operates as a simulacrum—constantly produced and reconfigured—rather than being rooted in biological or social reality.

Gender Games on the Digital Stage: AI Influencers and the Performative Traces of Butler (1999)

Butler (1999) argues that gender is a performance and that this performance constitutes gender identity, positing that gender is composed of a series of acts. Butler (1999) emphasizes that gender is not a fixed identity but rather a process constantly reproduced through the repetition of social norms.

Drawing on academic research on gender and AI applications, as well as Butler's (1999) "theory of performative gender", studies indicate that the content created by AI influencers on digital platforms has the potential to shape young individuals' perceptions of gender and contribute to the reproduction of gender norms.

A thesis study investigating the social media representations of feminized AI influencers Shudu Gram and Miquela Sousa, used in the fashion industry, explored how their representations reflect and affect power dynamics and social inequalities. The study revealed that Shudu and Miquela's representations reinforced racial stereotypes, perpetuated gender inequalities, and upheld unrealistic beauty standards, emphasizing that these virtual sexualized representations reinforce gender stereotypes and power imbalances (Halteren, 2023).

Natural language processing (NLP), a critical component of widely used AI systems such as Amazon's Alexa and Apple's Siri, has shown evidence of gender biases. Word embeddings, where words are converted into numerical representations and used as inputs for NLP models, highlight that such gender biases are human-induced (Feast, 2019). According to UNESCO's 2019 report, "I'd blush if I could: Closing gender divides in digital

skills through education", AI datasets contain gender disparities, and the processing of subjective data has the potential to propagate and reinforce gender discrimination (West et al., 2019). While AI technologies and algorithms could offer new opportunities for gender equality, the lack of a specific strategy in this regard poses the risk of creating or reinforcing patterns of gender inequality.

METHODS

In the research that sought to answer the question of the attitudes of Gen Z university students toward the gender identities and representations of AI influencers, logistic regression analysis is used in modeling the variables selected with machine learning methods. When the dependent variable has two or more categories, one of the most commonly used methods as an alternative to linear regression analysis is logistic regression analysis. In logistic regression analysis, the dependent variable is expressed as binary, and the independent variable can be categorical or numerical (Agresti, 1990; Hosmer & Lemeshow, 2000).

The specific form of the logistic regression model is shown in Eq. (1) (Hosmer & Lemeshow, 2000): $\pi(x_i) = E(Y|x_i) = \frac{e^{\beta_0+\beta_1 x_i}}{1+e^{\beta_0+\beta_1 x_i}}$.

The center of the logistic regression study is the logit transformation $\pi(x_i)$. This transformation is shown in terms of $\pi(x_i)$ by Eq. (2) (Hosmer & Lemeshow, 2000): $g(x_i) = ln\ ln\left(\frac{\pi(x_i)}{1-\pi(x_i)}\right) = ln\ ln\left(\pi(x_i)\right) - ln\ ln\left(1-\pi(x_i)\right) = ln\ ln\left(\frac{e^{\beta_0+\beta_1 x_i}}{1+e^{\beta_0+\beta_1 x_i}}\right) - ln\ ln\left(\frac{1}{1+e^{\beta_0+\beta_1 x_i}}\right) = ln\ ln\left(e^{\beta_0+\beta_1 x_i}\right) = \beta_0 + \beta_1 x_i$.

The ratio in Eq. (2) shows the relationship between the probability of an event occurring and the probability of it not occurring. This ratio is called the odds ratio. It provides information about the probability of the situation of interest according to the reference situation (Hosmer & Lemeshow, 2000).

The model can be shown by Eq. (3): $\pi(x_i) = E(Y|x_i) = \frac{e^{\beta_0+\beta_1 x_{i1}+\beta_2 x_{i2}+\ldots+\beta_p x_{ip}}}{1+e^{\beta_0+\beta_1 x_{i1}+\beta_2 x_{i2}+\ldots+\beta_p x_{ip}}}$, where $x_i = (x_{i1}, x_{i2}, \ldots, x_{ip})$, $i = 1, 2, \ldots, n$.

After the model's general definition and derivation expression, another critical step is to determine the model's significance correctly. The use of the determined model is directly related to the measurement of significance. It is one of the essential steps, as is determining the model. Therefore, the suitability of the model is determined by the Hosmer-Lemeshow test. If significance > 0.05, the comment "the model is suitable" can be made (Hosmer & Lemeshow, 2000).

In logistic regression analysis, the selection of variables, the creation of the model, and the determination of model significance provide much information about the model selection to be used. However, evaluating the validity of the determined model in various ways provides a more secure way to use the model. The evaluation of the significance and validity of the models and the Nagelkerke R^2 value is one of the guiding results for the researcher regarding the use of the model. On the other hand, values such as accuracy, F1 score, recall, and receiver operating characteristic (ROC) are essential guides in the model selection.

For readers unfamiliar with the metric, the ROC curve is a graphical tool used to evaluate the discriminatory performance of a binary classification model. It plots the true positive rate (sensitivity) against the false positive rate (specificity) across all possible classification thresholds. The area under this curve, commonly referred to as the area under the curve (AUC) or ROC-AUC, summarizes model performance in a single value ranging from 0.5 (no discriminatory ability, equivalent to random guessing) to 1.0 (perfect discrimination). An AUC value above 0.7 is generally considered acceptable, above 0.8 is considered good, and above 0.9 is considered excellent in the social and behavioral sciences (Hosmer & Lemeshow, 2000). In the present study, the ROC-AUC values are reported alongside accuracy, recall, and F1 scores to provide a comprehensive assessment of each logistic regression model's capacity to correctly classify participants as followers or non-followers of AI influencers. This multi-metric evaluation approach is particularly important given the class imbalance in the dataset (25% followers vs. 75% non-followers), as accuracy alone can be misleading when class distributions are unequal.

It is a noteworthy issue in the literature that variable selection increases model performance by eliminating unnecessary and irrelevant features. The benefits of methods, such as increasing model performance, reducing computational costs, and improving the explainability of models, have been discussed in various

ways. The effects of variable selection on accuracy and computational time have been examined with different data sets (Theng & Bhoyar, 2024; Guyon & Elisseeff, 2003; İlhan Taşkın et al., 2023).

The variable selection approach has also been used in survey data. Higgins and Koch (1977), who analyzed the relationship between byssinosis, a respiratory disease of workers working in the cotton textile industry, and certain individual and occupational factors, used an occupational health survey in the study and applied the generalized chi-square analysis method in variable selection. Stack and Unwin (1995), who introduced a new method that considers interactions in the selection of independent variables in survey data, stated that traditional variable selection methods mostly examine only the main effects and determined the variables known to be important with the proposed method and kept them in the model. Ardiansyah et al. (2023) and Iparragirre et al. (2023) proposed solutions to different problems by using variable selection methods on surveys in their studies. Based on this, our study provides a new statistical perspective when measuring attitudes towards AI influencers.

Due to the importance of variable selection, this study used random forest, ridge regression, gradient boosting, k-nearest neighbors (k-nn), lightGBM, LASSO, XGBoost, and AdaBoost methods for variable selection. The first 10 variables are selected from the Variable Importance values of these methods, and these variables are included in the logistic regression analysis to model the participants' probability of following AI influencers. The variables found to be significant in the models obtained for each method are interpreted.

The university students studied in the sample are taken from the websites of the universities because the province of Eskisehir is limited to the total number of students receiving associate, undergraduate, and graduate education at Eskisehir Osmangazi University, Anadolu University, and Eskisehir Technical University[1]. The total number of students here is determined to be 66,370.

University students were selected as the target population for this study for several theoretically and empirically grounded reasons. First, and most fundamentally, the study investigates Gen Z—a cohort defined by its unprecedented immersion in digital media, social platforms, and algorithmically curated content environments. University students in Turkey, the vast majority of whom fall within the Gen Z age range (born between 1995 and 2010), constitute the most representative and accessible segment of this generational cohort. They are among the primary consumers and active co-creators of social media content, making them particularly relevant to a study examining attitudes toward AI influencers. Second, university students represent what may be called "future opinion leaders"—individuals who, by virtue of their educational background and digital fluency, are likely to play an influential role in shaping broader public discourse on gender, technology, and digital culture in the coming years. Understanding their perceptions of AI influencers and gender is therefore not merely of academic interest but carries significant societal implications. Third, the student population offers a practical advantage in terms of methodological control: it provides a relatively homogenous demographic in terms of age and digital media access, which reduces confounding variables and allows for more focused analysis of generational attitudes. It should be acknowledged, however, that the findings of this study are primarily generalizable to Gen Z university students in urban Turkish contexts rather than to the broader Turkish population. The study does not claim universal representativeness; rather, it intentionally foregrounds the perspectives of young, digitally literate individuals whose engagement with AI influencer culture is intensive and daily. Future research could extend this inquiry to other demographic groups—including older generations, rural populations, or non-student youth—to determine whether the patterns observed here reflect broader social trends or are specific to the university-educated segment of Gen Z.

The sample size is calculated as 382 based on Eq. (4), with a sampling error (*d*) of 0.05 and a confidence level (*1-t*) of 95%. The online survey is applied to students receiving associate, undergraduate, and graduate education in Eskisehir in the 2024-2025 academic year. A sample size of 406 people was reached in the study. In Eq. (4), *N* represents the number of people in the universe, and *p* represents the frequency of the event (Krejcie & Morgan, 1970): $n = \frac{N.Z_t^2.p.(1-p)}{(d^2.(N-1))+(Z_t^2.p.(1-p))}$.

[1] Student enrollment numbers (access date: May 2024): https://oidb.ogu.edu.tr/Sayfa/Index/246/ogrenci-sayilari, https://oidb.anadolu.edu.tr/ogrenci-islemleri/istatistikler/ogrenci-sayilari/2024-2025-ogretim-yili, & https://www.eskisehir.edu.tr/tr/Icerik/Detay/ogrenci-sayilari-5.

The survey developed on AI influencers is first subjected to a reliability analysis. Therefore, the reliability of the survey is tested by applying the survey to 33 people. As a result of the reliability analysis, Cronbach's alpha value is determined as 0.896. Since it is in the range of $0.80 < R_2 < 1.00$, it can be said that the survey has high reliability (Alpar, 2013).

After the survey is found to be "highly reliable", the survey is applied online to students receiving associate, undergraduate, and graduate education in Eskisehir in the 2024-2025 academic year. The first part of the two-part survey, consisting of a nominal scale, includes demographic data such as age, gender, education, department, and social media usage. The second part includes statements directed at AI influencers with a 5-point Likert scale to measure attitudes toward reality and gender roles. The same statements are asked separately for females and males. This study, which was conducted on gender codes, aimed to have an equal number of females and males. The sample is selected from university students accordingly.

Regarding the survey distribution procedure, the online questionnaire was disseminated through the WhatsApp group communication channels maintained by instructors teaching at the three participating universities—Eskisehir Osmangazi University, Anadolu University, and Eskisehir Technical University. Course-based WhatsApp groups, which in the Turkish higher education context serve as a primary and widely adopted medium of instructor-student communication, provided a practical and institutionally embedded channel for reaching the enrolled student population. The survey link was shared exclusively within these groups by academic staff, ensuring that access remained effectively bounded within the student population of the three institutions. The survey was not publicly disseminated on open social media platforms or accessible to the general public, and no intentional snowball sampling beyond the student population was employed. It should be noted that the age distribution of the final sample includes a proportion of respondents who fall outside the conventional Gen Z age bracket (born 1995-2010): approximately 22% of participants were aged 25 or above, including those aged 31-35 (5.4%), 36-45 (4.7%), 46-60 (2.2%), and 60 and over (0.2%). The presence of these older participants is directly attributable to structural features of the Turkish higher education system rather than to any deviation from the intended sampling frame. Specifically, two distinct mechanisms account for their inclusion: first, some older respondents are students pursuing a second undergraduate or associate degree alongside or following a prior qualification—a common pathway in Turkey, where lifelong learning and credential diversification are increasingly prevalent. Second, and more significantly, Turkish higher education policy grants women aged 34 and above the right to enroll in associate degree and undergraduate programs through a reduced higher education entrance examination score threshold compared to the standard requirement. This affirmative access provision, designed to enhance educational equity for mature female learners, means that a subset of older women are enrolled as regular undergraduate or associate degree students at Turkish universities—and therefore fell within the legitimate target population of this study. Their inclusion in the sample is thus not a methodological anomaly but a reflection of the genuine composition of the student body at the participating institutions. Nonetheless, the authors acknowledge that approximately 78% of participants fall within the Gen Z cohort, and that the findings are primarily interpreted with reference to this majority group. Future research may benefit from explicitly stratifying the sample by generational cohort to examine whether significant attitudinal differences exist between Gen Z and older student participants.

When the frequencies of demographic data are examined, 47% of the participants are female, and 53% are male. When the age ranges of the participants are evaluated, it is revealed that the highest participation is between the ages of 21-24 with 54.7%, followed by the 18-20 age group with 23.2%, and the 25-30 age group with 9.6%. The age range with the least participation is 0.2% for those aged 60 and over, 2.2% for those aged 46-60, 4.7% for those aged 36-45, and 5.4% for those aged 31-35. In this respect, approximately 78% of the participants are Gen Z.

It is acknowledged that approximately 22% of the sample falls outside the Gen Z age range, which raises an important methodological consideration regarding whether the study's findings can be uniformly attributed to a single generational cohort. While the primary analytical focus of this study is on Gen Z as a whole, the authors recognize the value of examining the relationship between age and the key attitudinal variables measured in the survey. Specifically, exploring whether the logistic regression predictors of AI influencer following behavior differ systematically between Gen Z participants (aged approximately 14-29 at the time of data collection) and older participants would strengthen the internal validity of the study's

Table 1. Time spent by participants on social media

Hours	Frequency (N)	Percentage (%)
Less than 1 hour	29	7.1
1-3 hours	231	56.9
4-6 hours	123	30.3
6+ hours	23	5.7
Total	406	100

generational claims. Such an analysis could be conducted through interaction terms between age group and the significant predictor variables, or through stratified subgroup models. If the relevant data permit, the authors intend to address this as a direction for future research. In the meantime, cross-tabulation results by age group are partially reported throughout the findings section for significant variables, offering preliminary insight into age-based variation. Should the volume of additional age-related findings prove sufficient, they may constitute the basis for a complementary publication focused specifically on generational differences in AI influencer perception—an avenue the authors are actively considering.

Our participants are selected from students studying at universities in Eskisehir in 2024. Accordingly, the findings obtained from the distribution results regarding the education levels of our participants revealed that 67.5% of them are undergraduate students. In comparison, the rate of associate degree students is 21.4%. It is also found that postgraduate students are 11.1%. This research was subject to the approval of the Ethics Committee of Social and Human Sciences at Eskisehir Technical University, with reference number E-87914409-050.04-27551, dated June 11, 2024. During the data collection process, informed consent forms were used with the participants.

FINDINGS: GENDER ON THE DIGITAL STAGE

According to the results of the analysis regarding the duration of students' social media usage, it is seen in **Table 1** that approximately 57% spend 1-3 hours of the day on social media, followed by 30% with 4-6 hours of usage. According to **Table 1**, 87.2% of the time spent on social media is between 1 and 6 hours.

When the participants' AI influencer following rates are examined, 25% of them stated that they follow AI influencers. Since the study attempts to reveal the expectations and perceptions of reality regarding the gender construction of AI influencers, the low AI influencer following rate is not seen as a negative factor in the measurements. On the contrary, it provides an opportunity to reveal the variables that affect the following status.

This assertion warrants further methodological and theoretical justification. From a methodological standpoint, binary logistic regression—as employed in this study—is specifically designed to model the probability of belonging to one of two outcome categories, in this case "follows AI influencers" vs. "does not follow AI influencers". The validity of such a model does not require an equal or high proportion of cases in either category; rather, what it requires is sufficient cell counts in both groups to ensure stable parameter estimates. With 406 participants and approximately 101 AI influencer followers (25%), the dataset meets the minimum threshold typically recommended in the logistic regression literature for reliable estimation (Hosmer & Lemeshow, 2000).

More importantly, from a theoretical standpoint, the research questions of this study are directed not at measuring the prevalence of AI influencer following, but at understanding the attitudinal, gendered, and representational expectations that predict following behavior. Non-followers—who constitute the majority of the sample—are precisely the population whose expectations of AI influencers have been least shaped by direct consumption experience, and whose attitudes may therefore reflect broader, more culturally generalized gender norms. Including them in the model thus enriches rather than compromises the analysis: it allows the study to identify which specific expectations about gender representation, credibility, content type, and emotional tone differentiate those who actively engage with AI influencer content from those who do not. In this sense, the relatively low following rate is not a limitation to be explained away, but a substantive empirical feature of the sample that the logistic regression framework is well-equipped to model and interpret.

Table 2. Social media applications used by participants

Social media	Frequency (N)	Percentage (%)
Facebook	82	20.2
Instagram	382	94.1
Snapchat	5	1.2
TikTok	119	29.3
Twitch	60	14.8
X	221	54.4
YouTube	354	87.2

Table 3. The first 10 variables according to the variable importance results

Method	Gender	Variables									
Random forest	Female	S12a	S13a	S23a	S31a	S36a	S39a	S40a	S45a	S64a	S65a
	Male	S13b	S23b	S31b	S36b	S39b	S40b	S45b	S52b	S64b	S65b
Ridge regression	Female	S10a	S11a	S14a	S20a	S22a	S26a	S53a	S54a	S64a	S65a
	Male	S10b	S11b	S14b	S20b	S26b	S49b	S53b	S54b	S64b	S65b
Gradient boosting	Female	S12a	S23a	S31a	S33a	S39a	S40a	S45a	S48a	S52a	S62a
	Male	S12b	S13b	S38b	S39b	S45b	S47b	S48b	S52b	S61b	S65b
k-nn	Female	S30a	S31a	S33a	S36a	S37a	S38a	S40a	S41a	S42a	S44a
	Male	S30b	S31b	S36b	S37b	S40b	S41b	S42b	S43b	S44b	S52b
LightGBM	Female	S23a	S31a	S36a	S39a	S40a	S43a	S45a	S48a	S52a	S64a
	Male	S13b	S23b	S36b	S39b	S40b	S45b	S52b	S61b	S64b	S65b
XGBoost	Female	S9a	S13a	S23a	S32a	S36a	S39a	S43a	S47a	S57a	S65a
	Male	S10b	S11b	S13b	S23b	S35b	S36b	S37b	S39b	S52b	S65b
AdaBoost	Female	S12a	S14a	S29a	S33a	S35a	S39a	S40a	S48a	S62a	S65a
	Male	S13b	S23b	S29b	S31b	S39b	S40b	S45b	S47b	S48b	S65b

When the social media applications used by the participants are examined, it is determined that 94% used Instagram and 54% used X. **Table 2** shows that Snapchat is the least used, with 1.2%. In the second part of the survey, 57 propositions are used to measure attitudes towards gender roles and perceptions of reality towards AI influencers; separate propositions are prepared to represent female and male AI influencers.

The effect of participants' perceptions of male and female gender roles on AI influencer following is modeled with logistic regression analysis. First, all variables are included in the model, and the analysis is performed. Accordingly, since significance > 0.05, the model is accepted to be compatible with the data. However, it is concluded that all variables are statistically insignificant (significance > 0.05). It is not possible to observe the participants' expectations regarding gender roles on all variables.

Since all variables are added to the model and no significant variables are obtained, the questions asked for females and males are evaluated within themselves. However, when all variables are assessed for females and males, the model is found to be significant (significance > 0.05), and the variables are found to be insignificant (significance > 0.05). Therefore, the variables belonging to the questions asked of the participants for females and males are examined separately using random forest, ridge regression, gradient boosting, k-nn, lightGBM, LASSO, XGBoost, and AdaBoost methods through variable selection, and their significance is examined. Questions about female and male gender roles are evaluated separately based on the Variable Importance values of the methods, and each gender role is evaluated within itself. According to the Variable Importance values, the first 10 variables are assessed by sorting the Importance values from largest to smallest.

The first 10 most important variables according to the Variable Importance values obtained from the methods are given in **Table 3**. In logistic regression analysis, variables are analyzed using dummy variables. Accordingly, the strongly agree option is taken as the reference point. It represents the categories (1) strongly disagree, (2) disagree, (3) undecided, and (4) agree.

The accuracy and ROC values of the machine learning methods are shown in **Table 4**. Accordingly, the lowest accuracy and ROC values were obtained from the k-nn method, and the highest accuracy and ROC values were obtained from the AdaBoost and lightGBM methods.

Table 4. Accuracy and ROC values for variable selection methods

	Gender	Accuracy	ROC
Random forest	Female	0.6790	0.6109
	Male	0.7160	0.5765
Ridge regression	Female	0.7463	0.6581
	Male	0.7465	0.6462
Gradient boosting	Female	0.7654	0.5316
	Male	0.7284	0.6398
k-nn	Female	0.2469	0.4125
	Male	0.2346	0.3965
LightGBM	Female	0.6049	0.6050
	Male	0.5802	0.7851
LASSO	Female	0.6543	0.6840
	Male	0.6173	0.5780
XGBoost	Female	0.6296	0.5390
	Male	0.6420	0.5142
AdaBoost	Female	0.6777	0.9038
	Male	0.6721	0.8875

Table 5. Accuracy and significance results

Method	Gender	ROC	Accuracy	Recall	F1	Nagelkerke R^2	Significance
Random forest	Female	0.785	77.8%	61.8%	43.0%	0.585	> 0.05
	Male	0.769	77.1%	60.4%	38.4%	0.562	> 0.05
Ridge regression	Female	0.656	76.6%	78.6%	18.8%	0.461	> 0.05
	Male	0.686	75.9%	66.7%	16.9%	0.484	> 0.05
Gradient boosting	Female	0.770	77.3%	62.8%	37.0%	0.569	> 0.05
	Male	0.747	78.3%	69.2%	38.0%	0.551	> 0.05
k-nn	Female	0.741	76.8%	63.6%	30.9%	0.542	> 0.05
	Male	0.722	77.3%	73.9%	27.0%	0.521	> 0.05
LightGBM	Female	0.777	77.1%	61.9%	35.9%	0.572	> 0.05
	Male	0.764	77.6%	62.0%	40.5%	0.555	> 0.05
XGBoost	Female	0.656	76.6%	78.6%	18.8%	0.693	> 0.05
	Male	0.685	76.6%	65.4%	26.4%	0.396	< 0.05
AdaBoost	Female	0.771	78.6%	67.4%	41.6%	0.466	> 0.05
	Male	0.750	77.3%	66.7%	32.4%	0.450	> 0.05

The significance of the models belonging to the logistic regression analysis established with variables obtained from random forest, ridge regression, gradient boosting, k-nn, lightGBM, LASSO, XGBoost, and AdaBoost methods with the Hosmer-Lemeshow test, accuracy, recall, F1, and ROC curve results are given in **Table 5**. According to the **Table 5**, the logistic regression model established with variables obtained from LASSO for males is not statistically significant (significance < 0.05). All models other than this are found to be statistically significant. Therefore, the variable significances obtained from the LASSO method for males are not used in the logistic regression modeling.

Logistic regression models are established using the variables obtained from the methods; only significant variables are presented in the tables. On the other hand, the relationships between the variables found to be significant and the variables of gender, age, education level, time spent on social media, and AI influencer following are examined through cross-tables. Only the relationships found to be significant are mentioned in the relevant tables. The significant variables obtained from the logistic regression models for female AI influencers using the significant variables obtained from machine learning methods are given in **Table 6**. The same variables found to be significant in the models are interpreted only once according to the (5) strongly agree category and are not interpreted again for different methods.

Significant variables from the random forest reveal the participants' attitudes towards female AI influencers.

Table 6. Significant variables obtained with Logistic Regression models for female gender roles

Method		B	Standard error	Exp (B)
Random forest	S12a (4)	1.631	0.912	6.072
	S31a (1)	1.627	0.726	5.087
	S31a (2)	1.368	0.507	3.926
	S31a (3)	1.003	0.447	2.727
	S31a (4)	1.170	0.417	3.222
	S36a (1)	2.492	0.756	12.081
	S39a (3)	1.064	0.539	2.898
	S65a (1)	-1.618	0.805	0.198
	S65a (2)	-1.894	0.590	0.150
	S65a (3)	-1.346	0.530	0.260
	S65a (4)	-1.250	0.507	0.287
Ridge regression	S64a (1)	1.151	0.545	3.163
	S64a (2)	1.466	0.549	4.331
	S64a (3)	1.847	0.584	6.341
	S64a (4)	1.236	0.660	3.441
Gradient boosting	S31a (1)	1.630	0.802	5.106
	S31a (2)	1.740	0.540	5.697
	S31a (3)	1.130	0.494	3.096
	S31a (4)	1.440	0.456	4.220
	S33a (4)	-1.010	0.406	0.364
	S39a (2)	1.205	0.596	3.336
	S39a (3)	1.585	0.561	4.879
	S39a (4)	1.245	0.527	3.472
	S52a (4)	-1.487	0.589	0.226
k-nn	S30a (2)	1.098	0.517	6.334
	S31a (2)	1.321	0.537	3.746
	S31a (4)	1.059	0.445	2.883
	S33a (4)	-.800	0.373	0.449
	S36a (1)	2.307	0.938	10.047
	S38a (1)	-1.994	0.833	0.136
LightGBM	S23a (2)	-0.903	0.436	0.405
	S31a (2)	1.394	0.520	4.030
	S31a (3)	1.072	0.472	2.921
	S31a (4)	1.133	0.433	3.104
	S36a (1)	2.093	0.788	8.110
	S39a (3)	1.159	0.571	3.187
LASSO	S64a (1)	1.151	0.545	3.163
	S64a (2)	1.466	0.549	4.331
	S64a (3)	1.847	0.584	6.341
XGBoost	S13a (4)	-1.145	0.503	0.143
	S36a (1)	2.135	0.783	8.459
	S36a (2)	1.162	0.564	3.197
	S39a (3)	1.522	0.562	4.584
	S39a (4)	1.093	0.528	2.983
	S65a (2)	-1.382	0.561	0.251
AdaBoost	S39a (2)	1.389	0.583	4.012
	S39a (3)	1.979	0.539	7.236
	S39a (4)	1.609	0.503	4.999
	S40a (1)	1.300	0.576	3.669
	S40a (2)	0.995	0.514	2.705
	S48a (4)	0.829	0.421	2.291

- The variable S12a reflects the participants' attitude, "I expect female AI influencers to use a rude and harsh tone of voice". Agree category (4) increases the probability of following an AI influencer by 6.072 times compared to the strongly agree category regarding female AI influencers' rude and harsh tone of voice. This shows that society expects a softer and gentler communication style from females. This reveals that participants do not want female AI influencers to share posts with a rude and harsh tone of voice and that it is a crucial factor in unfollowing them. It shows a softer and gentler communication style is expected when following a female AI influencer. When the variables found to be significant in

the model are examined in a cross-table with the gender variable, 92.5% of females and 74% of males do not want female AI influencers to use a rude and harsh tone of voice. This result raises questions about the continuation of gender roles. Politeness and gentleness are still expected from females, even if they are AI influencers. It is also striking that females do not want a rude and harsh tone of voice to be used at a higher rate.

- The variable S31a reflects the participants' attitudes towards "I expect female AI influencers to create different emotions in me, such as joy, sadness, anger, etc., with their posts". The probability of following an AI influencer increases (1) strongly disagree category by 5.087 times, (2) disagree category by 3.926 times, (3) undecided category by 2.727 times, (4) agree category by 3.222 times in relation to the attitude towards female AI influencers creating different emotions in me such as joy, sadness, anger, etc. with their posts. Compared to those who said "strongly agree", all other categories (especially "strongly disagree") indicated that they follow AI influencers with a higher probability. Doesn't expect an emotional bond? It is not related to gender; males have a similar situation. On the other hand, 17% of those who follow AI influencers and 27% of those who do not follow do not expect female AI influencers to create different emotions in them with their posts. According to this result, it can be said that Gen Z students have a more reserved attitude in terms of experiencing emotional intensity. It is seen that female AI influencers do not prefer posts with intense emotional content, whether positive or negative, which is an essential factor in the following of Gen Z university students. In line with the findings obtained from this variable, it can be said that the intense emotional reactions in female representation have lost their validity in Gen Z students.
- The findings regarding the proposition "I expect female AI influencers to promote products for housework and find them reliable" regarding the variable S36a increase the probability of following an AI influencer by 12.081 times in the (1) strongly disagree category. It is expected that those who say, "Female AI influencers are expected/found reliable to promote products for housework" will have a high rate of following. However, the result is precisely the opposite. Those who do not expect/find female AI influencers to promote products for housework (i.e., those who say, "strongly disagree") seem more willing to follow them. In this context, it can be said that there is no expectation that female AI influencers will promote products for housework. Accordingly, the widespread view that females are integrated with household chores in social life and that a female profile that offers content in this direction will be found more reliable has been broken in the context of gender roles. It can be stated that it is not considered essential for female AI influencers to offer content that integrates with housework to be found reliable. It can be noted that the gender variable is not essential for Gen Z students in finding reliable content. We can say that Gen Z is more willing to follow female AI influencers who do not offer this type of content.
- The S39a variable increases the probability of following an AI influencer by 2.898 times in (3) the undecided category regarding the findings regarding the proposition "I expect female AI influencers to promote fashion trends and products and find them reliable". It can be expected that people who say, "strongly agree"–that is, those who expect/find female AI influencers to promote fashion trends and related products–will follow at a higher rate. However, the result shows that the group saying "undecided" is more likely to follow. In this direction, it can be stated that the point that female AI influencers present content that associates them with fashion clothing is not considered important for Gen Z and that female AI influencers who present such content do not care about their content being found reliable. It can be said that topics such as fashion and clothing, which are commonly associated with females within the scope of gender roles, have moved away from the definition of roles for females and have become unimportant, according to the findings obtained in this study. In terms of expecting female AI influencers to promote fashion trends and products, 23% of females and 36% of males do not expect female AI influencers to do so. 24% of associate degree students, 33% of undergraduate students, and 18% of graduate students do not expect female AI influencers to promote fashion trends and products. 29% of AI influencer followers and 29% of non-followers do not expect female influencers to promote fashion trends and products.
- The S65a variable reduces the probability of following an AI influencer in the findings for the proposition "I expect the opposite sex to be present in the visual posts of female AI influencers" by (1)

strongly disagree category (1-0.198 = 0.802) by 80.2%, (2) disagree category (1-0.150 = 0.85) by 85%, (3) undecided category (1-0.26 = 0.74) by 74%, (4) agree category (1-0.287 = 0.713) by 71.3%. Participants who "definitely expect the opposite sex to be included in female AI influencer posts" are the group with the highest probability of following. Other categories showed less tendency to follow compared to this group. The presence of the opposite sex is also expected. Those who say, "strongly disagree"/"disagree" may find such a requirement (the presence of the opposite sex) meaningless or do not see it as important. They may not expect this content, and it may be unimportant. Therefore, since they do not expect this content, their motivation to follow influencers closely may be weak. Those who say, "undecided" may see the following influencers as a lower priority without thinking, "Should there be the opposite sex or not?" because they do not have a clear expectation. They may expect the opposite sex, it may be. The findings show that one factor that increases the motivation to follow female AI influencers is that they include a male partner. When we look at the representation of females in the context of gender roles, we can say that while females are expected to share and interact with females in the public sphere socially, this perception shows that being together with a man is not found disturbing in Gen Z.

Significant variables obtained from ridge regression reveal the participants' attitudes towards female AI influencers.

- The S64a variable, in the findings regarding the proposition "I would like female AI influencers to share their social media with their peers", increases the probability of following an AI influencer by 3.163 times in the (1) strongly disagree category, 4.331 times in (2) disagree category, 6.341 times in (3) undecided category, and 3.441 times in (4) agree category. According to the findings, female AI influencers are not expected to socialize with their peers. When evaluated together with the results obtained from **Table 6**, it can be said that there is no expectation from females to only see with their peers; on the contrary, there is an expectation to see females and males together.

The significant variables obtained from gradient boosting reveal the participants' attitudes towards female AI influencers.

- The findings obtained for the proposition S33a variable "I expect female AI influencers' posts to provide information on areas such as technology, science, finance" decrease the probability of following an AI influencer by 63.6% (4) agree category (1-0.364 = 0.636). Participants who said, "I expect female AI influencers to provide information on topics such as technology/science/finance", seem to have the highest probability of following. According to the cross-tabulations, 45% of females and 47% of males expect female influencers to provide information on topics such as technology, science, and finance. This proposition, which is not prominent for male AI influencers, also reveals the change in Gen Z's attitudes regarding gender roles. It reveals Gen Z's attitude towards females being more involved in areas such as science and technology.
- The findings obtained for the proposition "I expect female AI influencers to approach events emotionally" for the variable S52a decrease the probability of following an AI influencer by 77.4% (4) agree category (1-0.226 = 0.774). An emotional approach is expected from females. 28% of females and 36% of males expect female influencers to approach events emotionally. 22% of the 18-20 age group, 29% of the 21-24 age group, 51% of the 25-30 age group, 36% of the 31-35 age group, 63% of the 36-45 age group, and 30% of those over 46 want an emotional approach. 25% of associate degree students, 30% of undergraduate students, and 54% of graduate students wish for female influencers to approach events emotionally. In the context of gender, we can equate females with an emotional and caring approach. According to the cross table, males are now expecting an emotional approach. As age and education level increase, the expectation of an emotional approach from females increases. Artificiality and reality become blurred regarding intense emotions, which shows us that Baudrillard's (1994) simulation theory is supported.

Significant variables obtained from k-nn reveal the participants' attitudes toward female AI influencers.

- The findings obtained for the proposition "Female AI influencers appearing in traditional media (radio, TV, newspaper, cinema, etc.) makes me find them more realistic and trustworthy" variable S30a increase the probability of following an AI influencer by 6.334 times in (2) disagree category. 21% of

females and 24% of males find female influencers appearing in traditional media (radio, TV, newspaper, cinema, etc.) more realistic and trustworthy. 40% of the 18-20 age group, 42% of the 21-24 age group, 38% of the 25-30 age group, and 31% of the 31-35 age group do not want female influencers to appear in traditional media (radio, TV, newspaper, cinema, etc.). 48.5% of those who follow AI influencers and 40% of those who do not, do not find it more realistic and reliable if female influencers are in traditional media (radio, TV, newspaper, cinema, etc.). It is stated that the presence of female AI influencers in traditional media channels does not significantly affect being found more realistic and reliable. In this context, it can be said that there is no difference in finding female AI representations realistic and reliable in traditional or new media channels. However, when looking at cross-tables, the expectation rates of females in traditional media increase as age increases.

- The findings obtained for the proposition S38a variable "I expect female AI influencers to promote technology products and find them trustworthy" decrease the probability of following an AI influencer by 86.4% (1), strongly disagree category (1-0.136 = 0.864). 41% of females and 44% of males expect female AI influencers to promote technology products and find them trustworthy. It is striking that there is a sharp emphasis on this issue. Contrary to gender codes, females are found to be trustworthy in rational matters. In this direction, it can be said that there is an expectation that female AI influencers will promote technology products and that the level of trust increases with the presentation of females. These results reveal that they want more female AI influencers in male-dominated areas and that product information presentations in areas such as science, technology, and finance are found to be more trustworthy when they come from females.

The significant variables obtained from lightGBM reveal the participants' attitudes toward female AI influencers.

- The findings obtained for the proposition S23a variable "I expect female AI influencers to state that they are virtual frequently" decrease the probability of following an AI influencer by 59.5% (2) disagree category (1-0.405 = 0.595). The segment that "does not agree that female AI influencers should state that they are virtual" shows a lower tendency to follow than those who say, "strongly agree". They want to be reminded that they are virtual often. 40% of females and 38% of males want female influencers to say they are virtual frequently. In this context, they want to be reminded that female representation is often virtual. If we evaluate it in the context of the perception of reality, the high level of trust in females can be associated with accepting the presented reality as the new reality. Therefore, it can be said that they are waiting for a reminder request in order not to be trapped in that virtual reality.

The significant variables obtained from XGBoost reveal the participants' attitudes toward female AI influencers.

- The findings obtained for the proposition S13a, "I expect female AI influencers to use emotional emojis", decrease the probability of following an AI influencer by 85.7% (4) agree category (1-0.143 = 0.857). The use of emotional emojis is desired. In this context, emotional emojis are expected in the interaction content of female AI influencers' posts. It is seen that the association of emotions with females is reinforced in the context of gender roles.

The significant variables from AdaBoost reveal the participants' attitudes toward female AI influencers.

- The findings obtained for the proposition "Female AI influencers' gender affects my trust in different information they provide on the same subject" regarding the variable S40a increase the probability of following an AI influencer by 3.669 times in the (1) strongly disagree category and 2.705 times in (2) disagree category. This shows that the rate of following the influencer remains lower for the participants in the reference group (who say that the gender of the female AI influencer affects the trust in their information); on the contrary, those who say, "Gender does not affect my trust" follow at a higher rate. 39% of females and 35% of males say that gender does not affect their trust in different information given by female AI influencers on the same subject. 37% of followers say that gender does not affect their trust in different information given by AI influencers on the same subject. When evaluated with **Table 6**, it can be said that there is no such expectation from male AI influencers. Accordingly, it can be stated that gender is not an effective variable in creating trust in content presentation. It can be said that there is an egalitarian perspective towards genders.

Table 7. Significant variables obtained with Logistic Regression models for male gender roles

Method		B	Standard error	Exp (B)
Random forest	S31b (2)	1.475	0.531	4.370
	S31b (3)	1.186	0.477	3.273
	S31b (4)	.868	0.436	2.383
	S36b (1)	1.625	0.709	5.081
	S39b (3)	1.158	0.547	3.182
	S65b (2)	-1.690	0.610	0.185
	S65b (3)	-1.104	0.536	0.332
Ridge regression	S11b (1)	-2.232	0.866	0.107
	S65b (2)	-1.144	0.584	0.319
Gradient boosting	S39b (3)	1.409	0.608	4.090
	S45b (3)	1.255	0.531	3.509
	S45b (4)	1.112	0.551	3.041
	S52b (4)	-1.107	0.562	0.331
	S61b (4)	-1.263	0.598	0.283
	S65b (2)	-1.305	0.599	0.271
k-nn	S30b (3)	-1.286	0.531	0.276
	S30b (4)	-1.063	0.523	0.346
	S31b (2)	1.331	0.540	3.786
	S31b (3)	1.042	0.485	2.835
	S31b (4)	0.981	0.463	2.668
	S52b (4)	-1.049	0.517	0.350
LightGBM	S36b (1)	1.811	0.700	6.120
	S39b (3)	1.437	0.555	4.207
	S39b (4)	1.143	0.531	3.137
	S40b (1)	1.407	0.554	4.082
	S40b (2)	1.244	0.507	3.468
	S61b (4)	-1.240	0.605	0.290
	S65b (2)	-1.373	0.607	0.253
XGBoost	S11b (1)	-2.305	0.898	0.100
	S37b (2)	1.190	0.578	3.288
	S39b (3)	1.548	0.557	4.701
	S39b (4)	1.200	0.559	3.321
	S65b (2)	-1.206	0.544	0.299
AdaBoost	S31b (1)	1.711	0.825	5.532
	S31b (2)	1.627	0.556	5.089
	S31b (3)	1.202	0.494	3.326
	S31b (4)	0.939	0.456	2.558
	S65b (2)	-1.394	0.581	0.248

- The findings obtained for the proposition S48a variable "I expect female AI influencers to clearly show their emotional reactions (laughter, crying, etc.)" increase the probability of following an AI influencer by 2.291 times (4) agree category. 29% of females and 39% of males do not expect female AI influencers to clearly show their emotional reactions (laughter, crying, etc.). When examined in the context of gender and considering the findings of the variable S31a "I expect female AI influencers to create different emotions in me such as joy, sadness, anger with their posts", it is seen that Gen Z students have a negative attitude towards intense emotions, regardless of whether they are positive or negative. It can be said that this variable is more prominent in female AI influencers since judgments that they display emotional reactions at a higher level are generally concentrated on females. Gen Z expects emotional intensity at a level that is not excessive. In this context, it can be said that emotionality is the expectation of females in the context of gender representation. Female AI influencers on social media are also expected to meet this expectation.

Significant variables obtained from logistic regression models for male AI influencers using significant variables obtained from machine learning methods are given in **Table 7**. The model obtained for male gender roles for the LASSO method was not interpreted because it was determined that it was not a suitable model according to the Hosmer-Lemeshow test.

Significant variables from random forest reveal the participants' attitudes toward female AI influencers.

- It can be stated that the participants' attitudes towards the proposition "I expect male AI influencers to create different emotions such as joy, sadness, and anger in their followers" in the S31b variable are negative. The probability of following an AI influencer increases by (2) disagree category by 4.370 times, (3) undecided category by 3.273 times, and (4) agree category by 2.383 times. Compared to participants who answered "strongly agree", individuals in all other attitude categories are likelier to follow male AI influencers. Similar results were obtained with females. When the variables found to be significant in the model are examined in a cross-table with the gender variable, 24% of females and 26% of males do not expect male influencers to create different emotions in them with their posts. 17% of AI influencer followers and 27% of non-followers do not expect male AI influencers to create different emotions in them with their posts. 25% of those who use social media for less than 1 hour, 24% of those who use social media for 1-3 hours, 28% of those who use social media for 4-6 hours, and 22% of those who use social media for 6+ hours do not expect male AI influencers to create different emotions in me with their posts. Accordingly, it can be said that content posts from male AI influencers that do not have high emotional intensity, just like those from female AI influencers, are an effective variable in following.
- According to the findings regarding the proposition "I expect male AI influencers to promote products for household chores and find them trustworthy", variable S36b increases the probability of following an AI influencer by 5.081 times in (1) the strongly disagree category. Based on those who said, "I expect male AI influencers to promote products related to housework, and I find them trustworthy", it shows that those who said "strongly disagree" are more likely to follow influencers. 38% of associate degree students, 41% of undergraduate students, and 29% of graduate students do not expect male influencers to promote housework-related products. 41% of those who spend less than 1 hour on social media, 42% of those who spend 1-3 hours on social media, 35% of those who spend 4-6 hours on social media, and 30% of those who spend 6+ hours on social media do not expect male to promote products related to housework. Since a similar result was obtained for female AI influencers, it can be said that there is no such expectation regardless of gender codes.
- According to the findings obtained for the proposition "I expect male AI influencers to promote fashion trends and products, and I find them trustworthy" variable S39b, the probability of following an AI influencer (3) undecided category increases by 3.182 times. 25% of females and 37% of males do not expect male influencers to promote fashion trends and products. 11% of all student groups do not expect male influencers to promote fashion trends and products. 15% of AI influencer followers and 10% of non-followers do not expect them to promote fashion trends and products. The undecided attitude exhibited regarding the presentation and trustworthiness of content such as fashion clothing by male AI influencers reveals that a theme attributed more to females within gender roles has lost its importance for Gen Z students. According to the participants who are seen to have a similar attitude towards AI female influencers, it can be said that there is a tendency towards an attitude that the theme can be evaluated independently of gender in terms of the presentation and reliability of topics such as fashion and clothing. In this direction, it can be stated that in line with the variables S39a and S39b, Gen Z students have attitudes towards change in gender roles and tend to have a more egalitarian approach.
- The S65b variable decreases the probability of following an AI influencer by 81.5% in the (2) disagree category (1-0.185 = 0.815) and by 66.8% in the (3) undecided category (1-0.332 = 0.668). It could be the opposite sex, they expect it. 25% of those who spend less than 1 hour on social media, 12% of those who spend 1-3 hours on social media, 12% of those who spend 4-6 hours on social media, and 30% of those who spend 6+ hours on social media expect the opposite sex to be in the visual posts of male influencers. 43% of females and 46% of males expect the opposite sex to be in the visual posts of male AI influencers. In this context, it can be said that including a female partner in the content of male AI influencers increases the motivation to follow. The findings show no difference between male and female AI influencers and that they have the same attitude. In this context, it can be said that the egalitarian approach is an adopted attitude for these variables. In this context, it can be stated that there is an expectation of change in female roles.

The significant variables from ridge regression reveal the participants' attitudes towards female AI influencers.

- The S11b variable decreases the probability of following an AI influencer by 89.3% in the findings obtained for the variable "I expect male AI influencers to use a polite and gentle tone of voice" (1) strongly disagree category (1-0.107 = 0.893). Those who say, "I strongly disagree that male AI influencers should use a polite/gentle tone of voice" are 89.3% less likely to follow an influencer than those who say, "strongly agree". In this direction, we can say that politeness and courtesy are expected from male AI influencers. When looked at in the context of gender roles, we can say that there is an attitude towards a change towards integrating male representation with harsh, rude expressions. When the cross-tables between the S11b variable and education level are examined, it is seen that the expectation of a polite and gentle tone of voice increases as the level of education increases. 71% of associate degree students, 75% of undergraduate students, and 82% of graduate students expect male influencers to use a polite and gentle tone of voice.

Significant variables obtained from gradient boosting reveal the participants' attitudes towards female AI influencers.

- Regarding the variable S45b, "I do not expect content shared by male AI influencers to be accurate and reliable", the probability of following an AI influencer increases by 3,509 times in (3) the undecided category and by 3,041 times in (4) the agree category. It can be said that there is not much opinion on this issue. 20% of females and 32% of males expect content shared by male influencers to be accurate and reliable. This variable, which is not prominent in female AI influencers, shows no such expectation of accuracy and reliability in male AI influencers. The lack of expectation in terms of accuracy and reliability of the shared content may be related to the knowledge that the content produced belongs to an AI, the lack of expectation of accuracy and reliability from the male representation, and the lack of such an expectation in social media content. When considered in the context of gender roles, the fact that the variable that is not prominent in females is seen in male representation indicates that males, who are perceived to have lower levels of trust and accuracy than females, continue to have the same perception in AI representations. When viewed from the perspective of perception of reality, it can be said that the content production of the character known to be AI will be viewed with suspicion and, therefore, has a low level of reality.
- The variable S52b, "Expecting male AI influencers to approach events emotionally", decreases the probability of following an AI influencer by 66.9% in the (4) agree category (1-0.331 = 0.669). Emotional sharing is expected. 38% of females and 41% of males expect male influencers to approach events emotionally. When evaluated with S52a in **Table 7**, it can be said that the expectation of an emotional approach has increased for both females and males. Accordingly, the results obtained, where the perception of reality and artificiality are mixed, support Baudrillard's (1994) simulation theory.
- S61b variable "I expect male AI influencers to wear vibrant and colorful clothing" variable decreases the probability of following an AI influencer (4) agree category (1-0.283 = 0.717) by 71.7%. 41% of females and 39% of males expect male influencers to wear vibrant and colorful clothing. 39% of associate degree students, 38% of undergraduate students, and 36% of graduate students expect male influencers to wear vibrant and colorful clothing. In this direction, it can be said that there is an expectation that male AI influencer representation will be present on social media with more vibrant and colorful clothing, contrary to gender norms. It reveals a strong expectation for the darker colors attributed to males in gender norms to change. There is no significant difference between the groups in comparisons made according to education levels and gender. Expectations are parallel in expecting males to wear vibrant and colorful clothing as the level of education increases or decreases.

Significant variables obtained from k-nn reveal the participants' attitudes toward female AI influencers.

- The findings obtained for the proposition "Male AI influencers appearing in traditional media (radio, TV, newspaper, cinema, etc.) makes me find them more realistic and trustworthy" for the variable S30b show that the probability of following an AI influencer decreases by 72.4% in the (3) undecided category (1-0.276 = 0.724), and by 65.4% in the (4) agree category (1-0.346 = 0.654). They expect males in traditional media. 41% of females and 45% of males find male influencers appearing in traditional

media (radio, TV, newspaper, cinema, etc.) more realistic and trustworthy. 48.5% of those who follow AI influencers and 40% who do not find male influencers appearing in traditional media (radio, TV, newspaper, cinema, etc.) more realistic and trustworthy. They expect males in conventional media. In this respect, it can be said that the presence of male representations in traditional media significantly affects their being found reliable and realistic. Traditional media channels' controlled, selective, and controlled structure can be shown to be a pre-selection in being found realistic and reliable. In this respect, it can be said that the trust in female representation is higher than in male representation. When looked at in the context of gender, the common belief is that males are unreliable, and the same is seen in social media. In relation to simulation theory, male AI influencers in traditional media allow people to mentally simulate their representations more easily and reliably. Thanks to its controlled structure, traditional media increases the perception of the reliability of male representations. This explains the effect of virtual representations on perceptions of reality and reliability in the context of simulation theory.

Significant variables from lightGBM reveal the participants' attitudes toward female AI influencers.

- The findings obtained for the proposition "Male AI influencers' gender affects my trust in different information they provide on the same subject" for the variable S40b show that the probability of following an AI influencer increases by 4.082 times in (1) strongly disagree category, and by 3.926 times in (2) disagree category. 57% of those who are on social media for less than 1 hour, 52% of those who are on social media for 1-3 hours, and 41% of those who are on social media for 4-6 hours said that male influencers' gender does not affect my trust in different information they provide on the same subject. They say that gender does not affect. In other words, it can be said that being male does not matter in the information they provide on a subject.

The significant variables obtained from XGBoost reveal the participants' attitudes toward female AI influencers.

- The findings obtained for the proposition S37b variable "I expect male AI influencers to promote personal care products and find them trustworthy" increase the probability of following an AI influencer by 3.288 times in (2) the disagree category. Personal care products are not expected from males. 45% of females and 47% of males do not expect them to promote personal care products. There are no demands for a well-groomed male. This corresponds to the preservation of existing roles. We can associate the trust point with the distrust of males.

DISCUSSION AND CONCLUSION

This study provides findings aimed at understanding the role of AI influencers in the reconstruction of gender roles, evaluated through the framework of Baudrillard's (1994) theory of simulation and Butler's (1999) theory of performative gender. The results reveal that societal expectations of AI influencers have, in certain aspects, shifted away from traditional gender roles, although these roles have been reconstructed in new forms in some areas.

One notable aspect of the findings is the departure from traditional gender roles. For instance, the expectation that female AI influencers should not produce content related to household chores, or the disinterest in male AI influencers promoting fashion and personal care products, indicates a disruption in conventional gender norms. Additionally, the general reluctance to embrace emotional content—where neither male nor female influencers are expected to produce overtly emotional material—suggests that Gen Z may perceive excessive emotionality as artificial or unnecessary. This group tends to favor more rational, information-focused content. While male AI influencers are expected to adopt a polite and courteous communication style, there is no significant demand for them to create explicitly emotional content. This indicates an evolution towards a more balanced structure of gender roles, though some traditional expectations persist.

Regarding the professional and thematic representations of AI influencers, the findings show that female AI influencers are perceived as credible in traditionally male-dominated fields such as technology, science, and finance. In contrast, no such expectation exists for male AI influencers, although there is a noticeable

tendency to advocate for greater visibility of women in STEM fields. On the other hand, there is a low demand for AI influencers of either gender in areas traditionally associated with women, such as fashion and household roles. This finding suggests a weakening of the notion that fashion and domestic responsibilities are exclusively female domains, reflecting the increasing flexibility of gender roles.

Differences in perceptions of trust and reality one of the most notable findings of the research is the difference in perceptions of trust and reality. In the context of trust and reality, female AI influencers are directly perceived as trustworthy, whereas male AI influencers are deemed to require additional verification mechanisms, such as those provided by traditional media, to be considered reliable. The necessity to remind audiences of the virtual nature of female influencers may be linked to the construction of a new perception of reality. The lower trust attributed to male influencers could reflect societal tendencies to view men as figures that need to be monitored. In this context, the higher trust placed in female AI influencers is a significant finding regarding how gender roles are projected onto AI influencers.

Additionally, it was found that the presence of the opposite gender in the content created by AI influencers increases follower engagement. This indicates a preference in social media content for representations that feature men and women together rather than emphasizing individual portrayals. The differing expectations of male and female AI influencers in terms of content sharing—shaped by traditional media and societal perceptions—reveal that gender is being reproduced in new forms.

Professional and thematic representations of AI influencers when examining the professional and thematic representations of AI influencers, it has been observed that female AI influencers are perceived as credible in traditionally male-dominated fields such as technology, science, and finance. While such expectations are not placed on male AI influencers, there is a growing tendency to advocate for greater visibility of women in STEM fields. Conversely, in areas traditionally associated with women, such as fashion and household roles, there appears to be low demand for AI influencers of either gender. This finding suggests that the notion of fashion and domestic responsibilities being exclusively tied to women has weakened, reflecting a shift towards more flexible gender roles.

These patterns can be more fully understood when situated within Turkey's specific socio-cultural context. Turkey occupies a distinctive position in global gender discourse. Public debate over gender equality has intensified in recent years, with issues such as women's labor force participation and femicide becoming prominent in political and media discourse. Against this backdrop, the findings of the present study take on particular significance. The preference among participants for female AI influencers to be recognized as credible authorities in STEM-related domains—fields from which Turkish women have historically been underrepresented—may reflect an aspirational dimension in gender perception: a desire for the digital sphere to model the equity that remains elusive in many offline domains. Conversely, the low demand for AI influencers of any gender in traditionally feminized domains such as fashion and housekeeping may indicate that Gen Z in Turkey is actively resisting the reproduction of domesticity norms that have historically constrained women's social roles. This interpretation aligns with Butler's (1999) argument that gender is not a fixed essence but a performative enactment that can be subverted and renegotiated through repetition and deviation. In this sense, the participants' expectations of AI influencers can be read as a form of performative resistance—a rejection of the gendered scripts that traditional media has long reinforced. Furthermore, the finding that AI influencers are not strongly associated with traditional gender roles resonates with prior research on virtual influencers conducted in Western contexts (Arsenyan & Mirowska, 2021; Halteren, 2023), suggesting that the decoupling of digital personas from conventional gender identities may be a cross-cultural phenomenon specific to digitally native generations rather than a context-specific Turkish outcome. However, the persistence of certain gendered expectations—such as the need for male AI influencers to undergo additional credibility verification—points to the continued salience of culturally embedded gender hierarchies, even in digital spaces. This nuanced picture—of simultaneous disruption and reproduction of gender norms—is precisely what Baudrillard's (1994) concept of the simulacrum helps to illuminate: AI influencers do not simply mirror existing gender realities, nor do they transcend them entirely. Rather, they constitute a new hyperreal space in which gender norms are simultaneously cited, distorted, and reconfigured. Taken together, these observations move the findings beyond descriptive enumeration and toward a deeper interpretive account of how AI influencer culture intersects with gender, generation, and cultural context in contemporary Turkey.

In conclusion, this study provides significant insights into how gender roles are being transformed through AI influencers. While gender roles have gained flexibility in certain aspects, it has been observed that some traditional patterns persist. Evaluating these findings through the lens of Baudrillard's (1994) theory of simulation, it can be argued that AI influencers are no longer merely entities mimicking real influencers but are constructing a new reality of their own. By perpetuating gender representations as simulacra, AI influencers detach societal perceptions from reality, creating a new form of hyperreality. In this context, gender roles are being reshaped through AI influencers, serving as a reference point for society's future perceptions of gender.

One of the most significant findings of this study is the departure from traditional gender role expectations in several domains. The finding that participants do not expect female AI influencers to promote household products (S36a) nor male AI influencers to promote fashion items (S39b) warrants careful interpretation. The current findings suggest that Gen Z university students are actively resisting these inherited associations when engaging with AI-generated content.

This resistance can be understood through Butler's (1999) concept of performative gender. If gender identities are constituted through repeated performances, then AI influencers—as programmable entities—offer opportunities for what Butler (1999) might call "resignification"—the subversive repetition of gendered norms that can transform their meaning. By rejecting the expectation that female AI influencers should perform domesticity, participants are implicitly challenging the naturalization of women's association with the private sphere. Similarly, the lack of demand for male AI influencers to perform fashion consumption disrupts the gendered coding of consumer practices. However, the persistence of some traditional expectations complicates this picture. The finding that female AI influencers are expected to use a polite and gentle tone of voice (S12a), while male AI influencers are also expected to adopt polite communication (S11b), suggests that certain gendered communication norms are being reconfigured rather than abandoned.

The finding that female AI influencers are perceived as trustworthy in male-dominated fields such as technology, science, and finance (S33a and S38a), while male AI influencers require traditional media verification to be considered reliable (S30b), presents a fascinating paradox that requires contextualization within Turkish gender dynamics. Turkey has a long history of women's participation in professional fields, particularly since the early Republican period, when women were encouraged to enter medicine, law, and education as symbols of modernization (Kandiyoti, 1987). This historical legacy may contribute to an implicit cultural assumption that women who succeed in male-dominated fields are particularly competent and trustworthy—having overcome additional barriers to achieve visibility.

The finding that including opposite-gender figures increases engagement with both male and female AI influencers (S65a and S65b) is particularly significant for understanding gender dynamics in digital spaces. The presence of both genders in AI influencer content may signal that the content is relevant to broader audiences, increasing its perceived legitimacy. From a Butlerian perspective, this finding also resonates with the notion that gender is fundamentally relational—performed not in isolation but in interaction with others. AI influencers who appear alone may seem incomplete or inauthentic because gender performance, according to Butler (1999), always occurs within a matrix of social relations.

One of the most striking findings of this study is the relative absence of strong gender-based expectations or concerns among participants regarding AI influencers. Rather than indicating a lack of relevance, this absence is deeply meaningful and warrants careful interpretation within the Turkish sociocultural context. This finding reflects a generational shift in gender perceptions. Gen Z in Turkey, having grown up with widespread internet access and global social media platforms, has been exposed to diverse gender representations and discourses that challenge traditional norms. From a theoretical perspective, the absence of strong gender-based concerns resonates with Butler's (1999) notion of gender performativity: AI influencers as programmable entities offer opportunities to disrupt or re-signify gendered performances, and Gen Z's openness to gender-neutral AI representations suggests a willingness to experiment with new forms of gender performativity in digital spaces. Similarly, Baudrillard's (1994) concept of simulacra helps explain why gender may become less salient in hyperreal contexts—when the distinction between real and artificial blurs, the gendered expectations attached to "real" bodies may lose their force.

Integrating these findings with the theoretical frameworks introduced earlier reveals the profound implications of AI influencers for understanding contemporary gender dynamics. Baudrillard's (1994) theory of simulacra posits that in postmodern society, representations no longer refer to any external reality but rather circulate as self-referential signs. AI influencers exemplify this condition: they are not representations of real people but rather simulations that generate their own reality. The finding that participants evaluate AI influencers based on content quality rather than gender authenticity suggests that they have accepted these figures as legitimate social actors in their own right, not as imperfect copies of humans. This acceptance has implications for gender performativity. If, as Butler (1999) argues, gender is constituted through performance, then AI influencers' performances are not merely imitations of human gender but rather original performances that contribute to the pool of gendered possibilities available for citation and repetition. When an AI influencer performs gender in ways that depart from traditional norms—by, for example, a female AI influencer providing technology information without emotional display—that performance becomes available for future iterations by both human and non-human actors. The hyperreal AI influencer thus expands the repertoire of gendered performances, potentially accelerating cultural change. However, the persistence of some traditional expectations—such as female politeness or male credibility concerns—reveals the limits of hyperreal freedom. Even in the simulation order, gender remains anchored to cultural histories that cannot be simply escaped. AI influencers, despite their artificial origins, are interpreted through cultural frameworks that predate them. The challenge for future research is to track how these frameworks evolve as AI influencers become more prevalent and as new generations grow up with them as familiar cultural figures.

While this study provides valuable insights, several limitations should be acknowledged. First, the sample is limited to university students in a single Turkish city (Eskisehir), which may not represent the diversity of Turkish youth, particularly those in rural areas or with lower educational attainment. Future research should extend this investigation to other regions and populations to assess the generalizability of these findings. Second, this study focused on stated expectations and attitudes rather than actual following behavior or long-term engagement patterns. Experimental or longitudinal designs could provide a richer understanding of how these attitudes translate into behavior and how they evolve over time as AI influencers become more prevalent. Third, the study examined gender in isolation from other social identities such as class, ethnicity, and religiosity, which likely intersect with gender to shape perceptions of AI influencers. Future research should adopt intersectional approaches to understand how multiple social locations condition responses to AI-generated content. Fourth, this study focused on Turkish participants, limiting cross-cultural comparison. Given the global nature of AI influencer culture, comparative studies across different national and cultural contexts would illuminate how local gender regimes shape responses to these global phenomena. The meaningful absence of strong gender-based concerns among participants—far from being a null finding—reveals important generational and cultural shifts in how young people in Turkey approach gender in digitally mediated spaces, challenging researchers to look beyond overt expressions of gender bias and consider how gender norms are being subtly reconfigured in the hyperreal domain of AI influencers.

This study, shedding light on the evolution of gender norms through the representations of AI influencers, reveals that Gen Z desires a more equitable and gender-independent world of influencers. The findings emphasize the importance of understanding the evolving gender dynamics and offer valuable insights into how societal gender codes are changing.

Positioning of AI influencers in hyperreality evaluated within the framework of Baudrillard's (1994) theory of simulation and Butler's (1999) concept of performative gender, AI influencers are positioned as hyperreal entities that replace reality. These AI influencers have evolved into simulacra that no longer merely imitate real influencers but instead construct a new reality of their own, influencing societal transformation processes as virtual agents of change. This study examines the multifaceted impact of AI influencers on the reshaping of gender norms, offering a foundational framework for future academic research.

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