
From Studio to Screen: Understanding User Motivations for Creating AI-Generated Self-Images on Instagram

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Abstract

AI tools have brought the technological shift after democratizing the access of AI image generation. After every few months the AI-image trends floods on Instagram and Instagram users and shares prompts so they can generate their exact portrait. The need of these AI image generation among Instagram users are undefined. The aim of this research is to identify and understand the user motivations for creating AI-Generated Self-images. To understand the user motivations, this study employed Quantitative survey method to collect data. This particular study collected data of 300 Instagram users who generated their portraits using AI tools. The results indicate that user motivation factors involve Fear of missing out (FOMO) with the highest mean score of 13.00 that defines how people get influence by others and do not want to miss out the trends. The 247 out of 300 users use Gemini over other AI tools which shows the accessibility and affordability of Gemini AI tool. Overall, the conclusion of the study is that the Instagram users get influence by others and generate their own AI -portraits to not miss out the trends and asks for the exact prompt to visualize themselves in the same virtual world having accessibility and affordability of the AI tools.

Keywords: AI-Portraits, AI Self-Images, AI Self-Portrait Trends, User Motivation, Technological Shift

Introduction

AI-generated images flood and trends on Instagram. People generate their AI self-images and share it on social media due to which audience ask for the exact prompt so they can create the same images, whereas some celebrities started making their own ai-generated portraits (Li et al., 2025). People use different apps to generate their portraits like; Gemini, Lensa AI app (Miltner, 2024). Gemini recently updated with Nano Banana AI image creation which makes images looks hyperrealist. The style on these sites and apps ranges from anime to fantasy to hyper-realistic model shots. People share their AI self-images on social media simultaneously which makes it go viral. The Ai-generated self-portrait that were in trend on Instagram were “Trending Polaroid couple” where social media was flooded with dreamy collaborations. “Vintage Saree” was even more popular, the users produced nostalgic retro edits of sarees with dramatic 90s Bollywood glamour, “Hug my younger self, with a baby trend” where people hug their younger selves, to the rise of retro-style recreations, “Handshake your younger self” where users created nostalgic and powerful images with their younger selves, representing their past and present selves sharing a story of personal achievements, lesson learned, and even humor about past experiences, “Winter snow trend” recently the Ai winter snow trend has taken over social media, filling feeds with

dreamy snow-covered portraits that look straight out of winter movie. Originally popularized by Meitu and now trending across Instagram, this cozy AI photo effects transforms any selfie into a snowy, cinematic masterpiece. During these trends the comment sections of Instagram posts filled with asking for the prompt “what prompt did you use?” “How did you make this?” “Which app did you use?”. Regular users, then influencers and even celebrities participate and share their AI self portraits on Instagram. The images looked professional, polished, often better than real photos. The only way of taking pictures in 16th-18th century was sketching and painting. In 1839, photography invented, however, it was still expensive because it required studio visits. In early 1900s photography studio became more common but still formal and costly affair. It required booking appointments, traveling to studio, paying photographers and waiting for development. In 1960s – 70s, polaroid made instant photography possible but still required equipment. In 1990s, digital cameras made photography more accessible. In early 2000s, camera phones began appearing. In 2010s, selfies became dominant form of self-photography (Kahlon & Liang, 2025). In 2016 – 2020 Faceapp, Face Tune allowed editing but still make you recognizable. Each technological shift democratized access further. With each technological shift also changed who could create idealized images of themselves. Whereas professional photography remained separate in its own ways as it is expensive, requires booking, specific timing, studios and multiple location shoots until AI tools arrived and collapsed that barrier. Traditional photography is expensive as it also includes makeup artists, wardrobe, location fees. People invest time in ways they research photographers to choose the best or the one according to their budget. They Book for shoots weeks/months in advance, and it take 2–3-hour session. People wait for days or weeks for edited final images. Most people do this rarely (graduating, wedding, special occasions). Since AI became accessible, some AI tools are free and some tools have monthly subscriptions. Some tools are completely free with limits. It takes minutes to generate images. The users are not bound of any specific time; they can generate their AI Portraits direct from their phones and time anywhere. People who feel social uncomforted can easily generate their AI portraits with complete privacy. It provides instant gratification; users can see results immediately and iterate quickly (Chen, 2024). Unlike traditional photography there is no appointment, no waiting, no coordination, you decide everything, no outside opinion until you share. People do experiments by trying different styles, looks, personas without judgement. Everyone can be a model now because AI provides professional-looking photos for everyone, AI gave access to aesthetic that was previously gatekept. AI generated portraits are not enhanced but idealized. AI algorithms trained on millions of images of models, celebrities, perfect faces. The AI learns and produces conventional beauty standards. It smooths skin, enhances symmetry, perfects lighting, adjusts proportions. Users share these AI portraits on Instagram which gets viral and people can see that on their explore page. Where people interact and pass comments on each other’s posts, asking what was the prompt? Or what prompt did you use? Became social interaction. One person posts, if others like the idea or style they want to try, create exponential spread. Existing studies has investigated different dimensions of AI-generated portraits, including technical complexities, ethical issues, and user feedback, and the motivation behind creating AI-generated self-portraits remain largely understudied. In particular, there is an evident gap of quantitative studies highlighting personal motivations on social media platforms such as Instagram where ai-images trends are expanding. This study explores the research gap by focusing on understanding that uncover what motivates Instagram users to create AI-generated self-portraits. It blends the research studies on inclusive accessibility of AI tools by collecting user insights among this transformative period.

Literature Review

The blend of AI and social media boosts the absolute personalization of feeds. AI technologies amplify the effects of social comparison by providing AI-generated idealized content, thereby provoking emotional reactions and escalating FOMO (Ali et al., 2025). The generative adversarial networks and deep learning models of AI technologies have made it possible to generate highly realistic and appealing content at a groundbreaking scale. The users can generate images that often portray idealized versions of reality featuring lifestyles that are unrealistic for most individuals (Tufail et al., 2024). The AI technology provides a solid, non-threatening form for self-exploration, allowing users to explore abstract feelings about their identity more accessibly. Usage of AI to generate self-images can be portrayed as a digital manifestation of the ideal self or a psychological wish, concepts foundational to psychoanalytic identity theory (Tóth et al., 2025). Missing out on rewarding social experiences is what drives users to continuously monitor their social media feeds. The feelings of individuals who feel they are missing something are associated with an increase in social comparisons, by comparing themselves with others' experiences posted by people they know (Servidio et al., 2024). The user adoption of Generative AI (GenAI) is largely driven by motivations such as ease of formation and enhanced creativity. It visualizes and actualizes complex ideas quickly, leading users to engage with such tools for creating personalized content (Eslam et al., 2025). GenAI has been adopted more rapidly than computers, overall adoption has been faster due to its cost-effectiveness and user-friendliness. ChatGPT is available for free or with a low-cost subscription. ChatGPT is used more frequently, followed by Gemini (Bick et al., 2024). The release of generative AI portrait applications has incited significant public and media debates, demonstrating that the technology is often viewed through the lens of established technological concerns (Miltner, 2024). When portrait photography was everywhere, users struggled to achieve a professional aesthetic, after AI-driven systems democratized access to high-quality portrait techniques for users regardless of their prior skill level (Kahlon & Liang, 2025). The primary advantages of Artificial Intelligence (AI) in photography include image generation, creation, editing, and processing. Integration capabilities allow users to generate aesthetically compelling and visually striking content with less effort. This accessibility to idealization fuels the rapid creation and dissemination of AI portraits on social media platforms such as Instagram (Chen, 2024). AI has shifted from being a specialized academic field to a transformative technology with substantial, cross-sectional applications. This fueled a movement toward the democratization of AI; this involves giving non-technical individuals widespread access to open AI models and data (Costa et al., 2024). The rapid evolution of AI has initiated a parallel movement towards its democratization, this democratization of AI is defined as ensuring that its benefits are not few but are distributed broadly (Chemnad & Othman, 2024).

Methodology

This research applies a quantitative research design using a survey as the collection method. It identifies and measures patterns in user motivations for generating AI portraits. The target population for this research includes Instagram users over 14-30+ years of age, totaling 300 Instagram users who have created at least one AI-generated self-portrait. Data was collected using a questionnaire distributed via Google Forms. This method was selected for its efficiency in collecting data from a large, geographically expanded sample while maintaining respondent anonymity, which is important when exploring personal motivations or behaviors.

Findings

The survey data provides a quantitative overview of user motivations, AI tools usage, the influence of social factors, and Accessibility Factors Influence Decision to use AI Tools. The findings are formed around the primary themes that appear from the data.

Primary Motivations for Creating AI Self-Images

Social and Logistical Drivers: User motivations are dominated by outer factors that reduces friction and maximize social relevance. Fear of Missing Out (FOMO) is highest rated motivations at a mean score of 13.00 and Convenience at 12.79. This strongly suggests that users participate in the trend because it is effortless and avoids social debarment.

Cost Novelty: Affordability 12.66 and Technological Experimentation 12.64 are also highly rated, indicating that the low financial barrier and the appeal of new technology are critical secondary motivators.

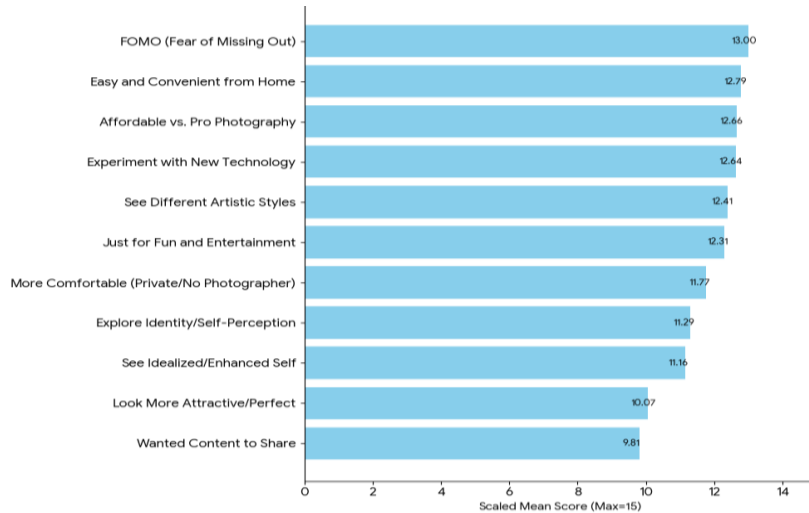


Figure 1: Primary Motivations for Creating AI Self-Portraits

Market Dominance and AI Tools Usage

The analysis of which tool users primarily chose reveals a solid market, where one AI tool is significantly outperforming others in capturing trend-following users.

AI Tool Preference: Gemini accounted for 234 user counts, securing 75% of the share among the top three tools. This demonstrates that accessibility and integration within familiar tools are major factors in user adoption for generating AI portraits.

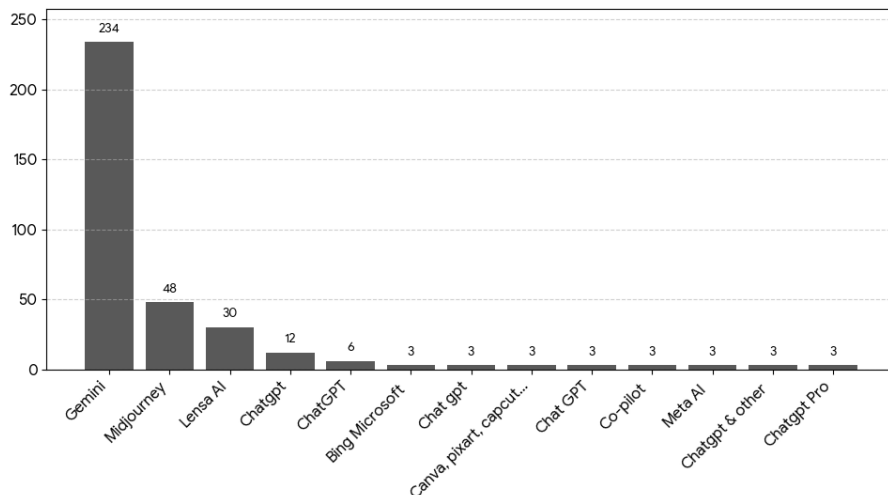


Figure 2: Primary AI Tool Usage

High Influence of Social Factors

Clear Agreement on Trend: The data indicates the majority of respondents confirmed they were influenced by the social factors, with 249 total counts falling into the Agree and Strongly Agree categories. The single largest response was “Strongly Agree” with 174 counts, It confirms that for a large segment of users, the AI self-image creation was certainly done to follow the social media trends.

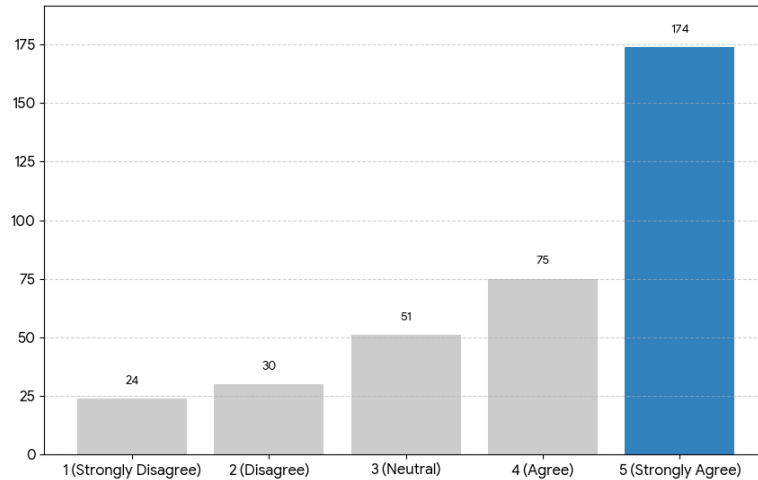


Figure 3: Influence of Social Factor on AI Portrait Creation

Tool Advantages and Accessibility

The advantages of the AI tools directly support the logistical motivations, prioritizing speed and accessibility.

Instant Gratification: “Instant results” achieved the highest mean advantage score of 13.42, followed closely by “Can do it from home” 13.25. The primary appeal of the tools is their ability to produce high-quality, shareable content immediately and remotely.

Autonomy: Advantages like “low cost or free” 12.18 and “No photographer needed” 11.90 confirm that users value the financial and personal autonomy and the AI tools provide over traditional methods.

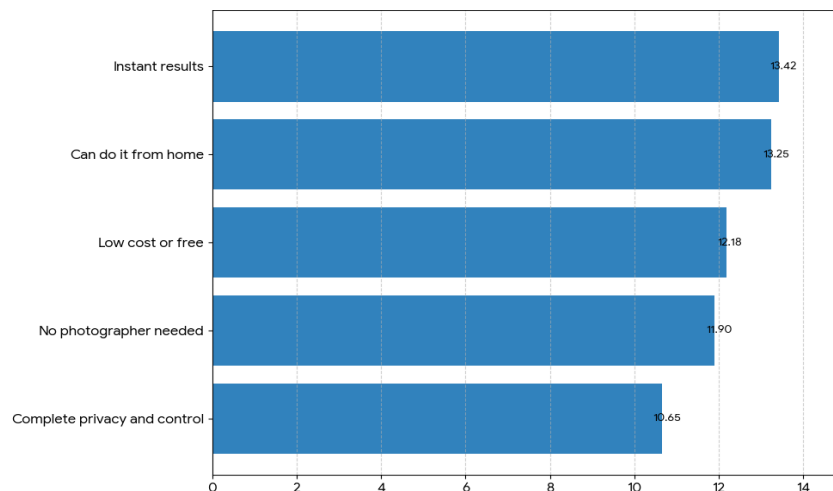


Figure 4: Accessibility Factors Influence Decision to use AI Tools

Results and Discussion

The data in this survey shows different patterns behind the user who uses AI-generative tools such as Gemini to generate self-portraits for self-expression or trend following purposes over Instagram and furthermore, they key findings clearly demonstrates that the convenience and ease of accessibility of such tools along with the FOMO eventually fires up the virality of such self-portrait trends over Instagram and other social media platforms. Furthermore, upon quantitative analysis shows that outdoor and logistical factors outweigh intrinsic creative motivations. When the data was analyzed, the strongest motivator behind generating AI self-images was FOMO with 13.00 score which reached more when the second highest motivator was convenience with 12.79 score. affordability (12.66) and technological experimentation (12.64), demonstrating that low-cost access and curiosity about emerging technology serve as important enablers. Gemini dominated with 234 responses clearly reflects how users gravitate towards tools integrated within familiar digital ecosystems rather than standalone applications. A combined 249 users selected agree and 174 strongly agree related to social factors that influence their decision which confirms that AI portrait creation functions primarily as a social media trend rather than just an independent creative practice. Major advantages align with user motivations are instant results and immediate gratification, creating from home and no photographer needed which means privacy and comfort with facing social interaction or anxiety, extremely low cost or free and democratizing access by eliminating traditional barriers.

Limitations

This study was conducted by using quantitative survey method of 300 Instagram users who generated their AI self-images, this limits the generalizability of the findings among people who are not on Instagram but still generate AI self-portraits. Future research should consider on what influences individuals who use more often social media platforms and those who rarely use for creating AI portraits. A Study can be conducted using qualitative interviews of AI users to understand and explore the reasons of using AI image tools.

Conclusion

This research shows the primary motivations of Instagram users to create and fall into the trend of AI-image generation to do self-expression. The core reason of why people were following such trend came out that it was fundamentally shaped by FOMO (Fear of Missing Out) and easy access to ai tools. Ever since AI is pushed out in the market, AI-generated self-portraits in Instagram became trend that reflects a convergence of technological innovation, social media dynamics and evolving idea of self-representation. This research explores that user motivations are primarily driven by FOMO (missing out the trend) and curiosity to see themselves just like others by prompt-sharing, over accessibility of ai tools. As AI-generation continues to evolve and impact our lives, it becomes highly important to fix users motivations behind using AI that affects algorithmic content creation on identity, authenticity and digital creation. This resulting data contributes the quantitative insights to the rapidly growing trend of the behavioral reasons of why people engage in such generative AI trends on Instagram. It's mainly due to the fear of missing out (FOMO), easy accessibility of tools and convenience. The study talks about the core and complex mechanism that AI-generated content is revolutionizing and by sharing the trends and further prompts to invite others to follow the same trend and get on the same bandwagon in the virtual world. Finally, further research is required and needed to understand these factors by In-dept interviews of social media users generating AI images.

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