

INVESTIGATING HUMAN PERCEPTIONS OF AUTHENTICITY IN AI-GENERATED VISUAL CONTENT

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Abstract

This study investigates human perceptions of authenticity in AI-generated visual content, specifically examining participants' ability to distinguish AI-generated images from real photographs. A mixed-methods approach was implemented for this study by combining both quantitative data from 125 participants' performance in identifying AI-generated images with qualitative insights gathered from two focus group discussions involving 16 participants.

The results revealed that participants correctly identified an overall 59.74% of images, with notable differences across categories. Animal images were the easiest to identify, with 71.12% accuracy, while portraits proved the most challenging, having an accuracy of 53.76%. Participants reported a moderate to high level of familiarity with AI-generated content. However, this familiarity did not correlate directly with improved accuracy in identification. When examined by age group, participants under the age of 18 outperformed all other age groups, having the highest average accuracy rate of 64.88%. Focus group discussions revealed that participants relied on visual cues like texture, lighting, and facial proportions found on the image but remained uncertain.

These findings suggest that while AI-generated images can be identified, they are heavily influenced by how we process information and prior exposure to digital media. The study highlights the growing challenge of distinguishing authentic images and the importance of digital media literacy to effectively assess AI-generated content. The implications of this study are significant for improving educational practices related to media literacy and for developing tools that can support more accurate identification of AI-generated visual content.

Key words:

AI-generated images, artificial intelligence, authenticity, human perception, image realism, digital media, graphic design, photographic authenticity.

1. Introduction

As the saying goes, "A picture is worth a thousand words," a phrase that emphasizes photography's ability to express emotions, stories, and ideas that words alone cannot convey. According to the Merriam-Webster Dictionary (2025), photography is "the art or process of producing images by the action of radiant energy and especially light on a sensitive surface." Lu et al. (2023) stated that photography plays a key role in the way we perceive and understand what we see in our everyday lives. Since its invention in the nineteenth century, it has been widely used for documentation, communication, and creative expression. Devices like digital cameras and smartphones are now readily available for anyone to take, edit, and share images instantly.

However, the advancements in artificial intelligence have shaped how we create and perceive images. With the introduction of AI tools such as DALL-E, Midjourney, and Stable Diffusion, machines are now capable of generating realistic images that are becoming harder to differentiate from real photographs (Velásquez-Salamanca et al., 2025). These AI-generated

visuals are not captured through camera lenses or real-life settings but are generated through computer algorithms that are trained on datasets.

Studies also have shown that people often struggle to accurately identify whether an image was created by a human or generated by AI. Velásquez-Salamanca et al. (2025) found that while participants could recognize human-made images in everyday scenes, they frequently misclassified AI-generated ones that appeared realistic and detailed. Similarly, Lu et al. (2023) emphasized that seeing is not always believing, as both humans and advanced detection systems can still be deceived by high-quality AI-generated images.

As for ethical challenges introduced by images generated by artificial intelligence, Illia et al. (2025) discussed how AI is increasingly used to spread both useful and misleading information on different platforms. This ranges from articles and social media posts to videos and images. One example is the use of Deepfakes to create AI-generated videos or photos that replicate a person. As Misal et al. (2024) noted, while deepfakes can be used creatively, they are now being exploited to spread misinformation and cause harm. For instance, a study by Ricker et al. (2024) warned that AI-generated faces are being used on social media to create fake accounts and manipulate public opinion.

As these concerns continue to grow, this study aims to investigate human perceptions of authenticity in AI-generated visual content. It will investigate the general public's ability to distinguish between real and AI-generated images, explore the factors that influence their judgments, and understand the reasoning behind their decisions. By combining both surveys for quantitative methods with qualitative insights from focus group discussions, the study aims to provide an in-depth evaluation.

1.1 Research Objectives

The research objectives of the study are as follows:

1. To examine the ability of the general public to distinguish between AI-generated images and real photographs.
2. To explore the factors that influence perceptions of authenticity, such as familiarity with AI technologies and exposure to digital media.
3. To understand the reasoning and thought processes behind participants' judgments through qualitative discussion.

These objectives aim to provide both quantitative and qualitative insights into how people perceive authenticity in visual content. The first objective focuses on measuring accuracy. The second considers external factors that influence perception. The third objective adds depth by exploring participants' explanations to understand how their judgments are formed. These objectives provide a thorough basis for examining how people perceive authenticity in AI-generated visuals.

1.2 Research Questions

Following are the research questions of the study:

1. How accurately can participants identify AI-generated visuals compared to real photographs in a survey task? (Survey)
2. What is the relationship between participants' familiarity with AI tools or exposure to digital media and their ability to judge authenticity?
3. What reasoning or thought processes do participants describe when explaining their judgments of AI-generated versus real visuals (Focus Group Discussion)?

2. Literature Review

2.1 Introduction to AI-Generated Imagery

Artificial intelligence has changed the way images are created and understood. With

the help of deep learning and generative models, systems like Midjourney, DALL-E, and Stable Diffusion can now generate images that look identical to real photographs (Velásquez-Salamanca et al., 2025). This is done by training systems with large sets of real images and text prompts to copy details that exist in real images, such as lighting, texture, and emotion. However, as more AI-generated visuals become available online, it's becoming harder for people to tell which images are real or made by AI. This has been an intriguing topic for researchers who want to understand how people determine the authenticity of AI-generated visuals. This literature review analyzes recent studies related to this topic and points out the research gaps that support the purpose of the current study.

2.2 Interpretation of AI-Generated versus Human-Made Images

Velásquez-Salamanca et al. (2025) studied how people interpret, identify, and differentiate AI-generated from human-made images. They found that participants were generally good at recognizing real pictures but often mistook AI-generated ones for being real. Furthermore, even though human-made images were regarded as more realistic, a number of AI images were still rated as real. This emphasizes how personal perception plays a big role in how humans decide if an image is real or not. The study showed a major research gap for the current study, as it focused on accuracy without examining the reasons behind why people think an image is real or fake. These factors that influence human perception include emotional response, previous experience with AI, or the context of the image. Understanding these mental and emotional factors is an important goal of this research.

2.3 Determinants of Trust in AI-Generated Content

A study conducted by Illia, Lawson-Body and Rouibah (2025) explored how AI has impacted trust. They explored how AI can be both beneficial and harmful by creating materials that can either be useful or spread misinformation. For instance, videos and images generated by AI named Deepfakes are being used to mimic or replicate a person. This technology has been used for creating satirical videos to exploit people, which has damaged their reputation. In this research, the authors highlighted that trust depends on factors like people's experiences, media knowledge, and their understanding of the creator's purpose. However, most research done is focused on misinformation rather than on how people decide whether an AI image is trustworthy or not. Visual or emotional cues that help people decide if they can trust what they see or not aren't explored in depth. The current study addresses this by exploring how viewers judge authenticity when trust is uncertain or when they are not told whether an image is AI-generated.

2.4 AI-Generated Faces and Social Media Authenticity

Ricker et al. (2024) studied how AI-generated faces are now being used on Twitter profiles. Their results showed that several social media accounts are using fake faces generated by AI that resemble a real existing person. While this technology can make creative work easier, it has made it easier for people to create misleading content by using fake social media profiles and spreading false information. While the study by Ricker et al. (2024) showed the increasing number of AI-generated faces being used online, it didn't explore how users feel about them or how extra details like captions affect perception.

2.5 Detection of AI-Generated Images

A study by Misal et al. (2024) focused on the detection of deepfakes and other AI-generated visuals. They noted that while AI-generated visuals have now become great tools, they can also be used for harmful purposes like spreading fake news or creating non-consensual images. Their research highlighted the need for better AI detection systems and public awareness to reduce misuse. This shows that while there are now technologies being used to detect fake images, very few studies focus on how people instinctively sense that something looks off and is not real. This is another gap that this study aims to fill by focusing on the

human ability to detect authenticity without relying on machines.

2.6 Human Perception of Art and Authenticity in the Age of AI

Van Hees et al. (2025) studied how people view AI-generated art made using DALL-E 2. They showed human-made and AI-generated artworks to participants and asked them to choose between them. The results showed that while many people knew they were not human-made, they still preferred the AI artworks for their visual appeal. This highlighted how the meaning of “authenticity” has changed and that people can find AI art beautiful and meaningful, even if it’s artificially generated. Nonetheless, this study didn't explore what made people feel that AI-generated art has emotional or creative depth even though it isn’t made by humans. The current study addresses this by exploring how people think and feel when deciding if AI visuals are authentic or not.

2.7 Human Accuracy in Identifying AI-Generated Images

A study by Roca et al. (2025) aimed to determine how accurately humans identify AI-generated images. This was done by creating an online game called “Real or Not Quiz,” where over 12,500 participants tried to tell real images from AI-generated ones. The results showed that on average, people scored about 62% accuracy, which is only a little better than guessing. However, a notable aspect of the research was that the participants performed best with human portraits but struggled with landscapes and city scenes. This suggests that people rely on factors that they are familiar with when judging authenticity. While the study provided useful quantitative values, it didn't explain why participants made their choices. The current research aims to expand on this by combining accuracy tests with open-ended questions to understand the reasoning behind each decision when differentiating authentic and AI-generated images.

2.8 The Impact of AI Art on Artists and Authentic Expression

Jiang et al. (2023) studied the impact of AI art on artists and their creativity. The study concluded that many artists are concerned about AI using their work without permission and harming the value that human creativity offers. However, the study also emphasizes that while AI art has a negative impact on artists, some artists use AI to support their creative ideas, not replace them. This raises questions about how people view art or visuals that are made with AI or whether they see it as more or less authentic when humans are part of its creation. The current study aims to answer this issue by exploring how knowledge of human involvement changes people's perception of authenticity.

2.9 User Engagement and Perception in Digital Advertising

Sharma and Lal (2024) compared users’ reactions to AI-generated and human-made images in online ads. They found that while AI visuals are more polished and customizable, human-made ones are better for stronger emotional connections and trust. It showed that people tend to engage more in visual content they believe in. However, this study highlighted the need for more research to understand what makes human-made visuals feel more authentic. The current study builds on this by exploring how people decide and explain their judgments about AI-generated images.

2.10 Research Gaps

Across all studies in this literature review, numerous research gaps were highlighted:

- Cognitive and Emotional Processes: Many studies measure accuracy (Velásquez-Salamanca et al., 2025; Roca et al., 2025) but do not explain the psychological or emotional factors behind authenticity judgments.
- Contextual Influences: Few studies explore how different settings, image types, or platforms affect perception (Ricker et al., 2024; Sharma and Lal, 2024).
- Cultural and Ethical Factors: There is limited research comparing how different cultures view AI art and authenticity (Jiang et al., 2023; Van Hees et al., 2025).
- Human and Machine Interaction: Most research separates AI and humans instead of studying

how they influence each other (Misal et al., 2024).

- **Qualitative Insights:** Most of the current research that has been conducted used numbers and statistics. However, only a few studies explore people's personal explanations and thought processes. This study aims to fill these gaps by exploring how people think, feel, and reason through both surveys and focus group discussions.

The reviewed studies showed that people's perception of AI-generated visuals is a complex topic nowadays, shaped by how real the images appear and how they are interpreted. There are instances where people are able to identify fake images from real ones, but their accuracy is often low and affected by emotions and context (Velásquez-Salamanca et al., 2025; Roca et al., 2025). In addition, human trust, creativity, and ethics further shaped how authenticity is understood in our society (Jiang et al., 2023; Sharma and Lal, 2024). Given these findings, this study aims to investigate how people perceive authenticity in AI-generated images.

3. Research Methodology

3.1 Study Design and Approach

This study used a mixed-methods design that combined both quantitative and qualitative approaches. The quantitative method involved an online survey using Google Forms to measure the participants' ability to distinguish between real and AI-generated images. For the qualitative method, focus group discussions were conducted to explore the factors behind the participants' judgments.

3.2 Sample and Setting

For the quantitative survey, a total of 125 participants were selected using convenience sampling. The participants represented a diverse range of age groups, categorized as under 18, 18-24, 25-34, 35-44, and 45 and older. They were also asked to rate their familiarity with AI-generated content on a scale from 1 to 5. 1 indicated not familiar at all, and 5 indicated very familiar.

For the qualitative method, two focus groups were conducted with 8 participants each, with a total of 16 participants. The discussions were conducted in controlled settings, and the groups were kept small to encourage open discussions.

3.3 Data Collection

The quantitative data was collected through a survey on Google Forms. Participants were shown 40 images divided into four categories, which were human portraits, landscapes, animals, and objects. Each category has 10 images, including 5 real and 5 AI-generated. They were then asked to identify whether each image was real or AI-generated.

For the qualitative data, participants were shown images in the focus group discussion and then shared whether they thought the image was real or AI-generated. The participants then discussed the factors that influenced their decision. After discussing their thoughts, the correct answer was then revealed. The entire discussions were recorded with participants' consent and transcribed after.

3.4 Data Analysis

For the quantitative method, the data from the survey were organized into tables. A total of 125 participants answered 40 questions each, resulting in 5,000 responses.

Table 1 summarizes the demographic and overall performance of the 125 participants. Table 2 illustrates participants' familiarity with AI-generated content on a linear scale from 1 to 5. Table 3 shows participants' performance across different age groups.

Tables 4 to 11 present the results for each image category. For each category, there are two separate tables. The first table presents the breakdown of correct and incorrect percentages for each question, showing the number of correct and incorrect responses and their average percentages. They were calculated by dividing the number of correct or incorrect responses by

the total number of participants, then multiplying them by 100

Formula for Average Correct Percentage for Each Question =

$$\text{Formula for Average Incorrect Percentage for Each Question} = \left(\frac{\text{Number of Correct Responses for Question}}{\text{Total Number of Participants}} \right) \times 100$$

The second table provides a summary of the total percent category. They were calculated by dividing the total of correct responses for each category by the total possible answers in the category, then multiplying them by 100.

Formula for Overall Correct Percentage for Each Category =

$$\text{Formula for Overall Incorrect Percentage for Each Category} = \left(\frac{\text{Total Correct Answers in Category}}{\text{Total Possible Answers in Category}} \right) \times 100$$

Table 12 showed the participants' performance across all categories. They were calculated by adding all the total correct or incorrect answers, then dividing by the total possible answers in the category, and multiplying by 100.

Formula for Overall Correct Percentage Across All Categories =

$$\text{Formula for Overall Incorrect Percentage Across All Categories} = \left(\frac{\text{Total Correct Responses Across All Categories}}{\text{Total Possible Responses Across All Categories}} \right) \times 100$$

For the qualitative method, the focus group discussions were audio-recorded. The transcripts were then reviewed to identify recurring patterns. This allowed an in-depth exploration of the factors influencing judgments, including visual cues, prior experience with AI-generated content, and ethical concerns.

Justification

The mixed-methods research design was chosen to address the research objectives of this study. The survey provided measurable data and an overview of the participants' responses. Conversely, the focus group discussions captured factors that cannot be measured through quantitative values, including their thought processes and emotions.

Additionally, Google Forms was used to gather quantitative data since it made data collection efficient for a large group of respondents. Furthermore, the decision to conduct focus group discussions allowed for interaction between the participants that encouraged them to express and even challenge one another's opinions.

4. Findings

Table 1. Insights on Participant Demographics

	Total Responses: 125	
Average	Median	Range
23.9/40 points	24/40 points	13-39 points
Age Range	Percentage	Count
Under 18	16%	20
18-24	46.4%	58
25-34	16.8%	21
35-44	10.4%	13
45-55	10.4%	13
Total	100%	125

Table 2. Familiarity with AI-Generated Content

Familiarity Scale Rating	Percentage	Count
1	4%	5
2	7.2%	9
3	32%	40
4	26.4%	33
5	30.4%	38
Total	100%	125

Table 3. Performance by Age Group

Age Group (Years)	Number of Respondents	Mean Score	Median Score	Score Range	Correction Average (%)
Under 18	20	25.95	26	16 - 36	64.88 %
18-24	58	24.59	25	13 - 39	61.48 %
25-34	21	23.76	23	17 - 39	59.40 %
35-44	13	20.85	22	10 - 26	52.12 %
45-55	13	20.92	20	13 - 29	52.31 %

Table 4. Correct and Incorrect Percentages (Portraits)

Guess if it's Real or AI! (Portraits)

Question	Correct Answer	Incorrect Answers	Average Correct Percentage (%)	Average Incorrect Percentage (%)
1	88	37	70.4%	29.6%
2	89	36	71.2%	28.8%
3	85	40	68%	32%
4	48	77	38.4%	61.6%
5	83	42	66.4%	33.6%
6	62	63	49.6%	50.4%
7	55	70	44%	56%
8	27	98	21.6%	78.4%
9	43	82	34.4%	65.6%
10	92	33	73.6%	26.4%

Table 5. Summary of Total Percentages (Portraits)

Metrics	Percentage (%)
Sum of Correct Percentages	537.6%
Sum of Incorrect Percentages	462.4%
Overall Correct Percentage	53.76%
Overall Incorrect Percentage	46.24%

Table 6. Correct and Incorrect Percentages (Landscapes)

Guess if it's Real or AI! (Landscapes)				
Question	Total Correct Answers	Total Incorrect Answers	Average Correct Percentage (%)	Average Incorrect Percentage (%)
1	101	24	80.8%	19.2%
2	96	29	76.8%	23.2%
3	34	91	27.2%	72.8%
4	64	61	51.2%	48.8%
5	87	38	69.6%	30.4%
6	77	48	61.6%	38.4%
7	56	69	44.8%	55.2%
8	77	48	61.6%	38.4%
9	59	66	47.2%	52.8%
10	53	72	42.4%	57.6%

Table 7. Summary of Total Percentages (Landscapes)

Metrics	Percentage (%)
Sum of Correct Percentages	563.2%
Sum of Incorrect Percentages	436.8%
Overall Correct Percentage	56.32%
Overall Incorrect Percentage	43.68%

Table 8. Correct and Incorrect Percentages (Animals)

Guess if it's Real or AI! (Animals)

Question	Total Correct Answers	Total Incorrect Answers	Average Correct Percentage (%)	Average Incorrect Percentage (%)
1	88	37	70.4%	29.6%
2	72	53	57.6%	42.4%
3	53	72	42.4%	57.6%
4	112	13	89.6%	10.4%
5	84	41	67.2%	32.8%
6	98	27	78.4%	21.6%
7	93	32	74.4%	25.6%
8	101	24	80.8%	19.2%
9	103	22	82.4%	17.6%
10	85	40	68%	32%

Table 9. Summary of Total Percentages (Animals)

Metrics	Percentage (%)
Sum of Correct Percentages	711.2%
Sum of Incorrect Percentages	288.8%
Overall Correct Percentage	71.12%
Overall Incorrect Percentage	28.88%

Table 10. Correct and Incorrect Percentages (Objects)

Guess if it's Real or AI! (Objects)				
Question	Total Correct Answers	Total Incorrect Answers	Average Correct Percentage (%)	Average Incorrect Percentage (%)

1	45	80	36%	64%
2	68	57	54.4%	45.6%
3	79	46	63.2%	36.8%
4	34	91	27.2%	72.8%
5	54	71	43.2%	56.8%
6	89	36	71.2%	28.8%
7	92	33	73.6%	26.4%
8	80	45	64%	36%
9	95	30	76%	24%
10	86	39	68.8%	31.2%

Table 11. Summary of Total Percentages (Objects)

Metrics	Percentage (%)
Sum of Correct Percentages	577.6%
Sum of Incorrect Percentages	422.4%
Overall Correct Percentage	57.76%
Overall Incorrect Percentage	42.24%

Table 12. Overall Summary of Percentage Across All Categories

Metric	Portraits	Landscapes	Animals	Objects	Overall Total
Overall Correct Percentage (%)	53.76%	56.32%	71.12%	57.76%	59.74%

Overall 1 Incor ct Percen tage (%)	46.2 4%	43.68 %	28.88 %	42.24 %	40.26 %
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5. Discussion

Table 1 summarizes the participants' demographic and overall performance. The average score was 23.9 out of 40, with a median score of 24. This indicates that participants correctly identified more than half of the images. The score ranged from 13 to 39 points, suggesting noticeable differences in participants' accuracy. The majority of the participants were aged between 18 and 24 years old, representing 46.4% of the sample. It is followed by younger and middle-aged groups, while older participants were minimally represented.

Table 2 shows participants' self-reported familiarity with AI-generated content using a linear scale. The largest proportion of respondents selected scale point 3 (32%), suggesting an average level of familiarity. This is followed by scale point 5 (30.4%) and scale point 4 (26.4%). Only 7.2% selected scale point 2, and 4% selected scale point 1. This demonstrates limited exposure to AI-generated media was uncommon within the sample. Collectively, 88% of respondents rated their familiarity at level 3 or above.

Table 3 shows participants' performance across age groups. Younger participants demonstrated higher accuracy in distinguishing AI-generated images from real photographs, with those under 18 achieving the highest mean score (25.95%) and average correctness rate (64.88%), followed by the 18–24 age group (61.48%). Accuracy declined in older age groups, with participants aged 35–44 and 45+ recording the lowest scores at 52.12% and 52.31%. However, this cannot be attributed to age alone. Hamrin Reinhed and Blomgren (2024) noted factors such as exposure to digital media and familiarity with AI technologies, which are more common among younger individuals, play a bigger role in accuracy.

The findings from Tables 4 to 11 revealed that accuracy varies per category. The Animals category achieved the highest overall correct percentage at 71.12%, with 28.88% incorrect responses. This higher accuracy suggests that participants found animal images easier to detect compared to other categories. One possible explanation is that animal images have visual features such as fur texture, body structure, and natural patterns.

In contrast, the Portraits category has the lowest accuracy, with an overall correct percentage of 53.76% and an incorrect percentage of 46.24%. This indicates that participants had the most difficulty when evaluating portrait images. This may be due to the details, such as skin texture and facial proportions, that were difficult to assess. These visual cues align with the guide outlined by Kamali et al. (2024), which recommends examining anatomical details, texture, and overall visual realism when identifying AI-generated images.

Landscapes achieved an overall correct percentage of 56.32%, while Objects recorded 57.76% correct responses. These suggest that participants had a comparable difficulty in both categories.

For Table 12, the performance across all categories was 59.74% for the overall correct percentage and 40.26% for the overall incorrect percentage. This indicates that participants were able to identify correct responses more than incorrect ones. However, this margin was relatively narrow, suggesting that while participants were able to accurately evaluate the images, it was still challenging overall.

In the qualitative method, the first focus group highlighted that their exposure to visual content on platforms like Instagram, Pinterest, and Google made them feel familiar with images. However, learning that some were AI-generated affected their confidence. While many AI images appeared convincing at first, the portraits category made the most debate, with participants focusing on facial proportions, hair texture, and overall “vibe.” Animal images were easier to identify due to anatomical and texture inconsistencies. Landscape and object images caused another discussion, especially after zooming in on details like lighting and background.

The second group also relied on visual clues such as facial symmetry, lighting, and shadows. Portraits remained difficult to assess, while landscape images were easier because of recognizable locations and text. Animal images confused participants, even when showing realistic textures and depth. A photographer that was part of the participants even mistook an AI-generated animal image for real. Participants often described AI images as “imperfect,” but these imperfections made them seem more realistic, adding to the confusion. Another participant shared that they knew someone whose art had been used by AI without permission, which led to a discussion about copyright and unemployment. Verma’s (2023) study emphasized how AI-generated content raises questions about ownership and attribution, as AI can replicate an artist's style without credit. This is supported by Kawakami and Venkatagiri (2024), whose findings suggest that generative AI has reduced job opportunities for artists, leading some to change their careers.

Another participant mentioned that AI-generated images can create false expectations that set unrealistic standards. This aligns with the findings of Tufail et al. (2024), which highlight how exposure to these contents negatively impacts self-esteem and body image through social comparison.

Overall, the two focus group discussions revealed that while participants were able to identify which images were AI-generated or authentic through visual cues and intuition, their uncertainty remained prevalent.

6. Conclusion

This study investigated human perceptions of authenticity in AI-generated visual content, focusing on participants’ ability to distinguish AI-generated images from real photographs, the factors influencing these perceptions, and the reasoning behind participants’ judgments. The quantitative findings revealed that animal images recorded the highest accuracy at 71.12%. This suggests that non-human images were easier to evaluate. In contrast, portrait images showed the lowest accuracy at 53.76%. This highlights the increasing advancement and difficulty participants faced when assessing AI-generated facial details. Younger participants, particularly those under 18, demonstrated better performance, likely due to greater exposure to digital media, with the performance differences reflecting varying levels of experience rather than age alone.

The qualitative data from the focus group discussions provided insights into participants’ thought processes when evaluating image authenticity. Participants relied on visual elements such as lighting consistency, proportions, texture, background details, and perceived imperfections. In addition, intuitive judgments or a general sense that an image felt “real” played a significant role in decision-making. Familiarity with AI-generated images and frequent exposure to digital platforms influenced participants' confidence. However, increased exposure didn't always lead to accurate identification, particularly when images appeared highly realistic. Participants also expressed ethical concerns, including the potential misuse of artists’ work without consent, job displacement within creative industries, and the spread of misleading or unrealistic imagery online.

Overall, the study demonstrates that while AI-generated images can be identified,

perceptions of authenticity are influenced by both cognitive analysis and experience. These findings emphasize the importance of strengthening digital media literacy to help individuals make informed decisions when engaging with AI-generated content.

Limitations and Recommendations

This study has several limitations that should be considered. Since the survey used convenience sampling, the participants were chosen based on availability rather than randomly. Thus, the findings may not fully represent the wider population. Another limitation is that the focus group discussions included only 16 participants. While this allowed for in-depth discussion, it may not capture the full range of perspectives that a larger group could provide. Additionally, participants were the ones who answered their familiarity with AI-generated images. There was no test conducted beforehand that measured their familiarity level. This means that their response could be an inaccurate self-assessment. Furthermore, the study included only four categories of images, which were portraits, landscapes, animals, and objects. These categories may not reflect the variety of AI-generated visuals available today.

Based on the limitations highlighted, several recommendations can be made for future studies. First, researchers may use random or more diverse sampling methods to further represent the general population. In terms of the category of visual content used, including more varied types of images, such as deepfakes and digital art, would give a broader understanding of how people perceive AI visuals. Additionally, to measure the exact familiarity of the participants with AI-generated visual content, an objective measurement tool can be implemented, rather than relying solely on self-measurement.

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