

The Incorporation of Artificial Intelligence in Contemporary Indonesian Photography (A Visual Representation Study of Songket Pandai Sikek)

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DOI : <https://doi.org/10.61796/ijss.v3i2.134>



Sections Info

Article history:

Submitted: April 23, 2026

Final Revised: May 19, 2026

Accepted: June 14, 2026

Published: July 01, 2026

Keywords:

Artificial intelligence

Contemporary photography

Visual culture

Songket

Pandai sikek

ABSTRACT

Objective: The issue addressed in this study arises from the increasing use of artificial intelligence in contemporary photography, which has the potential to alter the way cultural artifacts are represented. Songket Pandai Sikek, as a visual object rich in historical and symbolic meaning, undergoes aesthetic transformation when processed using AI technology. This raises questions about the extent to which such digital representations can maintain cultural identity or whether they shift the artifact into a purely aesthetic object. This research aims to explore the integration of artificial intelligence in contemporary photography through a case study of the visual representation of Songket Pandai Sikek, while examining the visual changes that occur in the process. **Method:** The study employs a qualitative approach through visual analysis and case study methods. Comparisons are made between traditional photographs of songket and images generated using AI to identify changes in patterns, textures, colors, and emerging aesthetic characteristics. **Results:** The findings indicate that AI technology can enhance songket details, sharpen colors, and produce more symmetrical compositions. These transformations expand the possibilities for photographers' visual expression but tend to shift the songket into a mere aesthetic object, potentially diminishing the cultural values that should remain present. **Novelty:** The integration of AI holds significant potential for innovation in culture-based photography, but it also carries the risk of meaning distortion if not accompanied by sufficient cultural understanding. As a recommendation, strong cultural literacy and ethical guidelines are needed for photographers, digital artists, and researchers to ensure that the use of AI in visual representation continues to respect the symbolic values, cultural identity, and historical context of Songket Pandai Sikek.

INTRODUCTION

The development of artificial intelligence has significantly changed the landscape of visual art over the past decade. This technology provides photographers with new capabilities to manipulate images with a level of precision that was previously unattainable. The visual reconstruction process produced by algorithms is capable of presenting more complex textures, details, and compositions. New forms of image generation processed through deep learning models also expand the aesthetic possibilities in contemporary photography practices. Studies show that AI plays a major role in documenting cultural heritage through its digital reconstruction capabilities [1]. The application of this technology increases the chances of preserving cultural objects in the form of high-resolution visual representations. The integration of AI adds a new dimension to how cultural identity is represented in digital media. Each visual result gives rise to discourse on the reinterpretation of cultural objects. This change creates a new dynamic in the understanding of traditional objects in the context of technology. The use of AI ultimately directs visual art towards a more analytical and experimental approach.

Collaboration between artists and artificial intelligence technology has led to the emergence of new forms of creativity in digital art. The creative process, which previously relied on manual intuition, has become more efficient with the support of algorithmic analysis. Research shows

that artists use AI as a supporting tool in visual design, concept reinforcement, and audience preference mapping [2]. The use of AI-based tools expands the exploration of visual styles and optimizes the production of works. Each experiment produces a wider variety of aesthetic forms. Artists can develop ideas more quickly thanks to the predictive capabilities of generative systems. This integration strengthens the relationship between human intuition and computational capabilities. Each work reflects the interaction between personal creativity and data-based analysis. This pattern shows the evolution of digital art towards a more adaptive direction. This practice shifts the conventional boundaries in the creation of contemporary visual works.

The use of artificial intelligence in art raises increasingly complex ethical and social issues. This technology is capable of imitating certain visual styles with a high degree of similarity, raising issues of authenticity. Research shows that this imitation process poses risks of plagiarism and copyright infringement when training data utilizes artworks without permission [3]. Every work produced by AI has the potential to obscure the authority of the creator. Image processing by algorithms often ignores the cultural context that accompanies visual objects. Cultural representations can lose their meaning when automated systems perform transformations without understanding their symbolic value. Artists and technology users need an ethical understanding in utilizing AI. The placement of moral values is important in the practice of creating digital works. Regulatory oversight is needed so that the use of AI remains in line with the principles of copyright protection. Technological developments present new ethical obligations for artists.

The use of artificial intelligence in the context of culture in Indonesia is gaining attention through various digitization initiatives. A press release from the Indonesian Cultural Congress shows that AI is being used to strengthen the management of Intangible Cultural Heritage data, which has faced obstacles such as format inconsistencies, limited documentation, and the risk of data loss due to poor storage systems. The AI system that has been developed is capable of organizing, integrating, and visualizing cultural information in the form of an analytical dashboard that displays the relationships between cultural elements in a more comprehensive manner. The initial stage of digitization began with 200 cultural objects and was then expanded to cover all 1,728 objects registered nationally [4]. Visualization based on cultural network analysis provides a more systematic picture of the connections between cultural domains, motifs, processes, and their social contexts. The program shows that AI functions not only as a technical tool, but also as a strategic instrument in cultural preservation, archiving, and representation. This initiative reinforces the urgency of research on the integration of AI in the representation of cultural objects, including in the context of Songket Pandai Sikek visuals.

Studies on AI in the Indonesian context show that this technology is beginning to influence social and cultural values in visual production. Research confirms that the integration of AI in graphic design affects how people interpret cultural symbols [5]. The automation process carried out by machines can shift the original understanding of traditional motifs. The recreation of cultural objects through digital systems can produce new interpretations that are not always in line with their original values. The application of modern technology creates a need for ethical awareness in visual representation. Local artists need to consider cultural sensitivity when using generative models. The representation of songket as a Minangkabau cultural artifact requires caution in the visual transformation process. Creating digital images that do not consider symbolic values has the potential to eliminate historical meaning. The involvement of cultural

communities is important to maintain the accuracy of visual representations. The combination of technology and tradition requires a responsible approach.

Academic studies on the originality of artificial intelligence-based works have become an important issue in contemporary art. Research shows that visual works produced by AI often lose the creator's identity because they depend on data patterns [6]. Automated systems work based on data accumulation so that the resulting images do not fully represent personal expression. The generative process presents the potential for a shift in authentic values in cultural representation. The representation of Songket Pandai Sikek produced by algorithms has the potential to simplify symbolic meaning. The use of generative technology requires curatorial strategies to maintain cultural integrity. Artists and researchers need to consider the relationship between data, context, and visual identity. AI-based methods demand a deeper conceptual understanding. Cultural representation requires a sensitive approach that prioritizes the integrity of values. Analysis of this issue is important to understand the long-term impact of technology on traditional textile art.

This study aims to analyze the use of artificial intelligence in contemporary photography practices that represent Songket Pandai Sikek. The focus of the study is on mapping the visual transformations that arise from the use of generative technology. The analysis is conducted to assess aesthetic, technical, and conceptual changes in AI-based songket images. The research examines the extent to which technology affects the integrity of cultural meaning contained in songket motifs and structures. Each finding is expected to strengthen the understanding of the relationship between technology and cultural identity. This research contributes to the development of traditional visual representation approaches in the digital space. This study provides a comprehensive understanding of the dynamics of AI integration in the visualization of cultural heritage. The research provides an analytical basis for artists and researchers in utilizing technology ethically. The results of the research provide a reference for cultural preservation in line with digital developments. This framework shows that technology can be an adaptive tool for the preservation of visual traditions.

RESEARCH METHOD

This research approach is based on the methodological principles of qualitative research, which emphasizes a deep understanding of visual and cultural phenomena. According to Creswell, qualitative research allows researchers to explore the meanings contained in cultural practices through the interpretation of non-numerical data, including images and visual artifacts [7]. Within this framework, the case study method is used because it provides a space for focused analysis of specific objects that have a distinctive cultural context, namely Songket Pandai Sikek. Case studies are also considered relevant when researchers seek to understand the dynamics of cultural representation that emerge from new technologies such as artificial intelligence. Thus, this theoretical approach forms the basis for examining how AI-generated digital images interact with the cultural values and meanings attached to traditional objects.

Data collection was conducted through visual documentation of Songket Pandai Sikek images produced through an artificial intelligence-based process, which were then compared with natural visual representations of authentic songket fabrics. The research stages included image selection, aesthetic observation, comparative analysis of form,

motif, color, and visual structure, as well as interpretation of the cultural meaning that emerged from each representation. The researchers conducted a descriptive analysis to examine the aesthetic changes that may occur as a result of the AI generative process and assess its implications for cultural meaning. The interpretation was carried out systematically, taking into account the Minangkabau cultural context and visual representation theory in cultural studies. The results of this analysis are expected to provide a deeper understanding of how artificial intelligence technology can influence perceptions and representations of traditional cultural heritage.

RESULTS AND DISCUSSION

1. Visual Transformation by Artificial Intelligence (AI)

Recent developments in digital visual technology show that artificial intelligence functions not only as an image processing tool, but also as a creative agent capable of reshaping how cultural objects are represented. Recent studies show that generative algorithms are capable of reconstructing traditional motifs through pattern inference and texture enhancement mechanisms, resulting in new visualizations that often differ from the original characters [8]. In the context of textile heritage, research by Gao et al., confirms that the digitization of ethnic motifs through AI can enrich visual documentation, but also has the potential to create “algorithmic reinterpretations,” a condition in which cultural patterns are reprojected based on the aesthetic preferences of the system [9]. This phenomenon is further emphasized by the findings of Halim et al., who identified a tendency for AI models to smooth, homogenize, or increase the color contrast of traditional textile artifacts, resulting in a shift between the original cultural representation and its digital version [10].

The theory in digital visual art states that artificial intelligence has the ability to map patterns, textures, and color distribution through pixel calculations and automatic pattern detection that is more precise than manual manipulation [11], [1]. In the context of this study, Figure 1. Songket Pandai Sikek Motif 1 shows a very natural weaving structure, characterized by a clear textile fiber appearance and soft colors in line with the characteristics of traditional songket. The surface texture in the original image shows the authenticity of the material and the complexity of the weaving technique, which are an important part of the cultural value of Pandai Sikek.

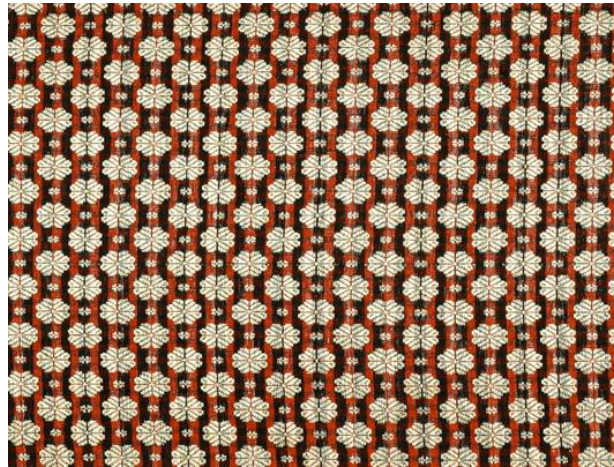


Figure 1. Songket Pandai Sikek Motif 1.

The interpretation of Figure 1. shows that motifs such as “Pucuk Rabuang” and geometric elements typical of Pandai Sikek present rhythmic regularity and harmonious colors that are not too contrasting, reflecting the Minangkabau textile philosophy that emphasizes balance, perseverance, and symbolic meaning in each visual element. The songket in the image displays a densely arranged and repetitive pattern with a main motif of eight-petaled flowers in golden yellow, woven symmetrically to produce a regular visual rhythm. The background of the fabric, dominated by brick red and black in a vertical striped pattern, further reinforces the classic character of Minangkabau songket, which is synonymous with the combination of gold thread and the base color of the fabric. The natural-looking surface texture shows the distinctive woven fibers, while the repetition of the flower motif gives an impression of luxury, density, and precision of workmanship, which are the main characteristics of Songket Pandai Sikek.

Entering the visual transformation phase through the generative system, AI reconstructs motifs by emphasizing contours, tidying up patterns, and increasing color saturation. This result can be seen in Figure 2. Songket Pandai Sikek Motif 1 (AI) displays a smoother, cleaner, and digitally structured visual version. Consistent with Gao (2025) findings, the generative model clarifies the surface texture and enhances the sharpness of the patterns, resulting in a more dramatic and aesthetic appearance.

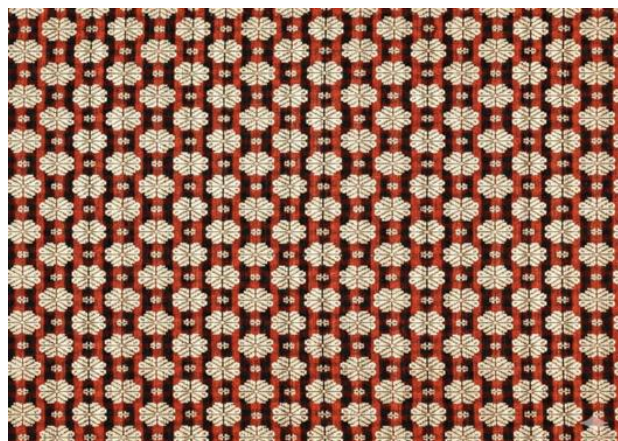


Figure 2. Songket Pandai Sikek Motif 1 (AI).

Interpretation of Figure 2. shows a tendency for AI to modify songket into more artistic visual objects rather than authentic cultural representations. This generative technology intensifies colors to make them appear much more vivid, resulting in visual compositions that are more striking than the original characters. Patterns that previously had natural variations are processed to be more regular and uniform, creating an impression of digital neatness that is not found in manual weaving. In addition, the texture of the fabric, which usually shows the distinctive weave of songket, is lost or obscured, making the visual surface appear smoother and more synthetic. These changes result in a new aesthetic and modern visual form, but one that has the potential to stray from the symbolic meaning and cultural value inherent in Songket Pandai Sikek.



Figure 3. Songket Pandai Sikek Motif 2.

Interpretation of Figure 3. shows that the Songket Pandai Sikek motif in this section displays a much more complex pattern composition than the previous two figures. The motif consists of repeating geometric shapes, such as salapak, kaluak paku, and a series of siku baranak, arranged in vertical and horizontal formations that give the impression of a highly organized and precise structure. The pattern of dark brown, brick red, and gold vertical lines emphasizes the dynamic visual rhythm, while the large motif on the right side highlights the diamond lattice pattern, which is one of the important characteristics of fine Songket Pandai Sikek. The texture details visible in the photo also reveal the high density of the weave, reflecting the weaver's skill in maintaining the consistency of the motif from one end of the fabric to the other. The entire motif sequence reinforces the character of Songket Pandai Sikek as a prestigious textile that not only carries aesthetic value, but also presents symbols of status, traditional philosophy, and Minangkabau cultural identity in a single visual unity that is rich in meaning.

Entering the visual transformation phase through the generative system, AI reconstructs motifs by emphasizing contours, tidying up patterns, and increasing color saturation. This result can be seen in Figure 4. Songket Pandai Sikek Motif 2 (AI) displays a smoother, cleaner, and digitally structured visual version. Consistent with Gao findings, the generative model clarifies the surface texture and enhances the sharpness of the patterns, resulting in a more dramatic and aesthetic appearance [12].



Figure 4. Songket Pandai Sikek Motif 2 (AI).

The interpretation of Figure 4 shows a tendency for AI to modify songket motifs into cleaner, more orderly, and more artistic visuals than the original characters. The generative algorithm emphasizes the shape of the eight-petaled flower, making it appear more symmetrical, with sharper contours and without the natural variations that usually appear in the manual weaving process. The brick red background color becomes more saturated, while the black and gold elements appear more contrasting, resulting in a more modern look but one that reflects less of the traditional fabric texture. The pattern repetition motif, which previously had a sense of diversity, has become more uniform due to automatic refinement by the AI system. This transformation ultimately creates a visually appealing representation, but one that is further removed from the material characteristics, symbolic value, and cultural authenticity of Songket Pandai Sikek.



Figure 5. Songket Pandai Sikek Craftsmen.

Interpretation of Figure 5. shows that the process of weaving Songket Pandai Sikek is not only a textile production activity, but also a cultural practice rich in value, carried out through skills passed down from generation to generation. The female weavers in the picture show a focused and concentrated body posture, reflecting the high level of precision required to produce intricate songket motifs. The dim lighting in the workspace emphasizes the traditional and domestic atmosphere, showing that the weaving process is still carried out manually without the aid of modern technology. The use of non-mechanical looms reinforces the identity of Minangkabau weaving techniques, which prioritize authenticity and the depth of symbolic meaning in each strand of thread. The dominant red color on the fabric being worked on indicates the early stages of lungsi thread arrangement, which forms the basis for the songket motif, while also representing the weaver's emotional connection to the work being produced. Overall, this image emphasizes that Songket Pandai Sikek is the result of a combination of manual skills, perseverance, and cultural values that cannot be fully replaced by digital or generative production.

Entering the visual transformation phase through the generative system, AI reconstructs motifs by emphasizing contours, tidying up patterns, and increasing color saturation. This result can be seen in Figure 6. Songket Pandai Sikek Craftsmen 2 (AI) display a smoother, cleaner, and digitally structured visual version. Consistent with Gao findings, generative models clarify surface textures and enhance pattern sharpness, resulting in a more dramatic and aesthetic appearance [12].



Figure 6. Songket Pandai Sikek Craftsmen 2 (AI).

The interpretation of Figure 6 shows that the visual image of songket craftsmen produced by AI underwent a significant aestheticization process compared to the manual

representation in the previous image. The lighting in the AI version of the image appears more even and dramatic, giving the impression of a neater and more controlled workspace, unlike the authentic atmosphere usually found in traditional weaving processes. The details of the fabric being woven are clarified with more symmetrical patterns and much more intense red colors, indicating the AI's tendency to emphasize visual aspects that are considered aesthetically appealing. The faces and poses of the artisans appear more idealized and refined, indicating a simplification or “tidying up” of human characters by the generative system. The overall visual result creates a more modern, clean, and stylized representation, but at the same time has the potential to obscure the traditional work context, material textures, and cultural atmosphere inherent in the activity of weaving Songket Pandai Sikek. Overall, a comparison of Figures 1–6 shows a shift in representation from authentic, natural, and culturally rich visuals to more aesthetic, structured, and modern generative visuals. This transformation reinforces the tendency of AI to position cultural artifacts as mere visual objects, rather than entities that contain symbolic value and traditional meaning. These differences emphasize the importance of caution in using AI to represent cultural heritage, as the process of visual algorithmization can create new interpretations that are distant from their authentic cultural meaning.

Table 1. Visual Comparison of Songket Pandai Sikek : Original and AI Generative.

No	Aspects Compared	Original Representation (Figures 1, 3, 5)	AI Representation (Figures 2, 4, 6)
1	Texture	The texture of the textile fibers is clearly visible; it looks natural and uneven.	Smoothed texture; loss of fiber detail; cleaner, more digital appearance
2	Pattern	The pattern motifs have slight variations that are natural to the manual weaving process; organic rhythm	The motifs are highly symmetrical and regular; the patterns are refined and standardized by algorithms.
3	Color	Soft colors, not too saturated, reflecting traditional textile materials and dyes	Brighter, more saturated, and higher contrast colors; AI enhances visual elements to make them more appealing
5	Cultural Depth	Contains symbolic values, traditional philosophy, and traditional Minangkabau meanings	The symbolic aspect weakens; visuals are treated as mere aesthetic objects
6	Authenticity	Very high; shows the actual condition of the fabric and production process	Authenticity is diminished; algorithmic reinterpretation creates visual discrepancies.
7	Production Process	Made manually by weavers, showcasing the atmosphere of a traditional workspace	AI displays an idealized visual; the space appears tidier and more controlled; humans are represented more “subtly.”

8	Pattern Harmony	There are subtle imperfections characteristic of hand weaving.	The “too perfect” motif; mathematical patterns that cannot be produced manually
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A comparison between the original representation and the AI-generated visual shows fundamental differences in the aesthetic characteristics and cultural meaning contained in Songket Pandai Sikek. The texture of the fabric in the original representation shows the natural irregularity of the fibers, giving an impression of authenticity and closeness to the manual weaving process. AI generative visuals display a much smoother texture, eliminating the fiber details that are characteristic of traditional materials. The motifs in the original representation show the organic rhythm of human work, full of nuance, while the AI version's motifs appear very symmetrical and homogeneous, giving the impression of a uniform mathematical reconstruction.

The colors in the original visual have a softness and reasonable saturation level that reflect the character of traditional textile dyes, while the colors in the AI version tend to be saturated and highly contrasting, giving a more dramatic impression than the natural color composition. The cultural depth of the original songket is strongly evident through the Minangkabau symbols and philosophy embedded in the patterns, while the AI version shows a weakening of symbolic function because the visual focus is more directed at digital aesthetics. The authenticity of the original representation is very high because the visuals display the factual condition of the fabric and the weaving process, while the AI version shows an algorithmic interpretation that creates new forms that are not always in harmony with traditional meanings.

The production process in the original visual depicts the craftsman's workspace, showing manual activities and cultural atmosphere, while AI creates a much cleaner and ideal visual space, obscuring the reality of traditional textile production. The harmony of motifs in the original weaving shows subtle imperfections that are characteristic of handmade products, while the motifs in the AI results appear too perfect, eliminating the human touch that is an important part of the identity of Songket Pandai Sikek. The overall interpretation shows that AI is capable of improving aesthetic quality but has the potential to reduce the symbolic authenticity and cultural meaning inherent in traditional songket visuals.

The research findings are in line with cultural representation theory, which states that digital media can produce new meanings that differ from the meanings of the source culture [13]. These findings also reinforce the study by Anggawirya et al., which explains that cultural representations in digital media often undergo reinterpretation due to the process of visual algorithmization, resulting in deviations from certain symbolic values [14]. These findings are in line with the research by Gao et al., which shows that AI-based visual systems tend to reshape the aesthetic structure of cultural objects because the pattern calculation process produces new styles that differ from the original structure [9]. The study by Zheng et al. Shows that style transfer algorithms produce significant changes in color and texture, making the original visual meaning unstable in a cultural

context [15]. Research by Asperti et al. proves that generative systems in digital art have the potential to create styles that are detached from traditional sources, making cultural interpretation increasingly complex when traditional motifs are processed by artificial intelligence [16]. Thus, the visual transformation by AI on Songket Pandai Sikek not only shows an improvement in aesthetics, but also a tendency to reconstruct visual patterns that have the potential to distance motifs from the authentic cultural meaning contained in these traditional textiles.

2. Photographers' Creativity in Using AI

The development of artificial intelligence in the world of photography presents a new paradigm in the creative process. The theory of computational photography positions AI as a system capable of processing visual elements through precise calculations, thereby significantly improving image quality [11]. The theory of digital creativity positions the relationship between photographers and AI as a form of co-creation that enables the formation of new visual styles through human-algorithm interaction [2]. Cultural photography studies identify that visual representations involving AI can create new aesthetic forms that are not always identical to the characteristics of the original cultural objects [1]. The integration of this technology means that photographers are no longer mere documentarians, but also visual directors who work side by side with generative intelligence.

The interpretation of the research results shows that the use of AI by photographers in visualizing Songket Pandai Sikek creates a broader aesthetic expansion compared to manual documentation. The generative process clarifies motifs, enriches colors, and highlights symmetry so that the visual appearance of songket looks more dramatic. The photographer's creativity emerges from the ability to select cultural aspects to be emphasized through the digital process, including an emphasis on patterns, colors, or specific visual atmospheres. AI visual transformation presents a new form of songket representation that is more aesthetically ideal. This representation shows a shift in meaning because the symbolic value and character of traditional textiles are not always fully reflected in generative visuals.

The connection between this study and previous research can be seen in AI's tendency to reshape cultural meaning. Anggawirya et al. explain that digital creators often reconstruct cultural objects, resulting in new aesthetic versions influenced by algorithms [14]. Anggraini et al. emphasize that human-AI collaboration forms a wave of digital creativity that blurs the boundaries between original works and algorithmic reconstructions [2]. Anifa shows that AI influences creative decisions in presenting social and cultural aspects [5]. Asperti et al. show that generative models often mimic artistic styles superficially without understanding their historical context [16]. Bansal et al. identify a tendency for AI to enhance colors, symmetry, and visual structure, resulting in more appealing but less authentic representations of objects [8]. Gao study shows that AI is capable of creating more harmonious visual structures even though the results stray from the original cultural character [12]. Halim et al. show that AI-based design innovations can reduce the visibility of traditional techniques in textile crafts [10]. Zheng

et al. assert that AI style transfer can produce new motifs that fall outside the rules of ethnic aesthetics [15].

The overall analysis shows that photographers' creativity in using AI lies in the negotiation between innovation and cultural responsibility. The representation of Songket Pandai Sikek produced by AI-based photographers contains new artistic values that expand traditional visual styles. This process presents opportunities for the development of visual expression, but also creates the potential for shifts in cultural meaning. The concept of creativity in this context operates at the intersection of the photographer's technical abilities, algorithmic intelligence, and understanding of the cultural values represented by visual objects.

3. Cultural and Ethical Implications of Representation

Cultural representation through artificial intelligence technology raises conceptual issues related to changes in meaning, authenticity, and the social function of cultural objects. Representation theory places cultural artifacts as forms of symbolic communication that must be understood in the context of the history, traditional values, and social practices of the community that owns them [13]. This theory emphasizes that any visual change to a cultural object has the potential to influence the way a community understands its collective identity and the values contained within it. The use of AI in modifying Songket Pandai Sikek places cultural representation in a new space of interpretation that is not always in line with the original meaning. Changes in form, color, and motif structure can reduce the symbolic concepts that have been passed down from generation to generation.

The interpretation of the research results shows that the AI version of Songket Pandai Sikek displays an attractive digital aesthetic but is distant from the atmosphere and cultural meaning preserved in the traditional weaving process. The visual reconstruction produces patterns that are too symmetrical, colors that are too intense, and textures that no longer reflect the character of the woven thread. The representation of craftsmen displayed by AI provides a more ideal, neat, and standardized image compared to the traditional work atmosphere which is full of processes. This visual transformation shows that AI works based on general aesthetic preferences, not based on the symbolic values inherent in Minangkabau culture. This condition opens up the possibility of a deviation in meaning when songket visuals are consumed by a public who is unfamiliar with the original cultural background.

The findings of this study show a pattern consistent with the research by Anggawirya et al., which emphasizes that digital creators often reshape cultural meanings thru the aestheticization of content [14]. The research by Anggraini et al. shows that the collaboration between humans and AI can create significant artistic innovations with the risk of erasing the cultural narratives behind the works [2]. Anifa's study shows that AI can shift design considerations from social aspects to purely visual aspects [5]. The assessment by Asperti et al. shows the limitations of AI in understanding historical context, resulting in visual outputs that only replicate style, not meaning [16]. Bansal et al. analysis describes AI's tendency to create stronger esthetic impressions than visual

authenticity [8]. The study by Gao et al. shows that the integration of AI in cultural forms produces alternative versions that do not always align with traditional esthetic norms [9]. Mughiroh & Munawara's analysis shows that the use of certain visual styles by AI can raise ethical issues when those styles have specific cultural backgrounds [3]. Halim et al. found that the integration of AI in textile crafts can shift the role of artisans as the primary skill holders in cultural production [10]. Zheng et al.'s study on style transfer of ethnic motifs shows that digital technology tends to create new versions of traditions that are not always in line with their original cultural codes [15]. The patterns of these findings indicate a consistency between the visual changes produced by AI and the potential obfuscation of cultural values.

An overall analysis of these findings shows that the application of AI in the representation of Songket Pandai Sikek requires serious attention to ethical and cultural aspects. The resulting digital representation has the potential to change the way the public understands Minangkabau cultural identity. The use of AI presents the potential for modern aesthetic dominance that can obscure the symbolic meaning, traditional processes, and philosophical values of weaving practices. Ethical considerations arise when visual modifications are made without regard to the original context, resulting in a transformation that places tradition in a secondary position. Strengthening cultural awareness in the use of AI is an important step to ensure that technological innovation continues to respect the values, history, and identity of the communities that are the source of visual inspiration.

CONCLUSION

Fundamental Finding : This study concludes that the visual representation of Songket Pandai Sikek undergoes significant transformation when processed through artificial intelligence, both in terms of motifs, colors, textures, and artisan representation. Analysis of the original images and AI-generated versions shows that artificial intelligence has the ability to emphasize patterns, enhance color clarity, and create more symmetrical and aesthetically pleasing visual compositions. This transformation expands the creative space for photographers to produce more dramatic and modern visuals, but it also brings about cultural changes that need to be considered. The digital representations produced by AI tend to position songket as purely aesthetic objects rather than cultural artifacts rich in symbolic value, thus creating the potential for a distortion of meaning in the context of Minangkabau cultural identity. **Implication :** The results of this study indicate that the use of AI in processing traditional cultural visuals requires a deep understanding of the values contained in these cultural objects. New visualizations produced by AI open up opportunities for innovation in the fields of photography, design, and cultural documentation, but ethical considerations are still necessary so as not to obscure the historical and philosophical meanings of local cultural heritage. This research provides an understanding that technology and culture can support each other when used wisely and purposefully, especially in the context of preserving traditional visuals through digital media. The recommendations from this study point to the need

to strengthen cultural literacy among photographers, designers, and digital creators who use generative technology to display visual cultural artifacts. The development of AI-based visual representation ethics guidelines is also important to ensure that digital innovation does not erase the identity and symbolic value of the cultures represented. **Limitation :** The study employs a qualitative approach through visual analysis and case study methods. Comparisons are made between traditional photographs of songket and images generated using AI to identify changes in patterns, textures, colors, and emerging aesthetic characteristics. **Future Research :** Further research is needed to expand the study to other forms of traditional textiles and develop cultural representation evaluation methodologies that are more culturally sensitive in the era of artificial intelligence.

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