

The Role of Artificial Intelligence in Creating Printed Designs with an Egyptian Heritage style for Organizing Sports Events

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Abstract:

The Egyptian Minister of Sports, Ashraf Sobhy, declared in May 2023 that his country's ambition surpassed the boundaries of organizing the African Cup of Nations for football, extending to the competition for hosting the FIFA World Cup. This announcement came at a time when the sports city in the new administrative capital received praise for being a comprehensive sports city, designated to host major sporting events like the World Cup. Located in the heart of the new administrative capital, the city was established in 2015 to serve as a venue for future sporting events in Egypt. Previously, the sports city hosted matches of the 2021 Handball World Cup and includes state-of-the-art stadiums for various sports, notably four football stadiums supported by infrastructural facilities and logistical services including transportation, hotels, and multipurpose buildings. Preparations for this global tournament involve not only the completion of infrastructure but also the creation of a visual identity reflective of the Egyptian character, with its deep-rooted heritage, authenticity, and illustrious history before the global audience. In accordance with the requirements of the Fourth Industrial Revolution and modern technology, it was imperative to address the latest developments of the era, particularly artificial intelligence, for its technological capabilities that provide innovative and advanced design solutions keeping pace with modern times. Furthermore, the field of textile printing is considered one of the most vital areas capable of expressing the authentic Egyptian character and directly relevant to the target audience worldwide through diverse textile printing products in terms of form and use. Additionally, the role of textile printing in organizing various sporting events must be studied. Therefore, the researcher emphasized the use of artificial intelligence tools to innovate printed designs embodying the authentic Egyptian character, enriching the visual culture of the recipient, and achieving the desired outcomes in promoting the Egyptian identity worldwide.

Research Problem: The research problem can be outlined as follows: 1. The insufficient utilization of artificial intelligence techniques in the field of textile printing design. 2. The lack of precise delineation of the balance between the designer's role and the assistance provided by artificial intelligence tools in the design process. 3. The inadequate academic scrutiny of the role of textile printing design in organizing various sporting events. 4. The limited exploration of the drawbacks of using artificial intelligence tools in design in previous studies.

Significance of the Research:

1. The research aims to highlight the role of artificial intelligence in the field of design and how it can be leveraged alongside the designer's skills. 2. It proposes new design visions and ideas imbued with the authentic Egyptian character, showcasing it to the world during significant global sporting events. 3. The research contributes to shedding light on the importance of textile printing in organizing major sporting events.

Research Objectives: 1. To study artificial intelligence in terms of its nature, tools, and appropriate utilization in the field of textile printing design. 2. To achieve new and innovative design solutions with the assistance of artificial intelligence tools. 3. To employ designs embodying the authentic Egyptian character in covering global sporting events. 4. To delineate the innovative role of the designer when employing artificial intelligence techniques.

Hypotheses: 1. The study of artificial intelligence tools and their diverse applications leads to enhancing the efficiency of the design process and improving the final product significantly. 2. The integration of the cognitive abilities of textile printing designers with artificial intelligence skills results in obtaining a vast array of innovative design solutions with high quality and advanced techniques. 3. The utilization of textile printing design in global sporting events contributes significantly to promoting the Egyptian character and showcasing the aesthetics of Egyptian civilization to the world.

Research Methodology: Descriptive Method: Describing the role of artificial intelligence tools in the design process. Analytical Method: Analyzing a selection of designs executed using artificial intelligence techniques to highlight their strengths and weaknesses. Experimental Method: Addressing the innovative aspect through conducting experiments and technical solutions for a number of designs suitable for showcasing the Egyptian character in global sporting events.

Scope of the Research: Temporal Boundaries: The emergence of artificial intelligence tools and techniques. Spatial Boundaries: Studying the impact of artificial intelligence tools on textile printing designers within the Arab Republic of Egypt.

Results: 1. The research concluded that the rapid development in AI design can lead to innovative design solutions while saving time and effort. 2. Intelligent technologies support human creative work, reducing the likelihood of errors and wastage of material and human resources. 3. Overreliance on technology may lead to a loss of diversity and cultural richness in design. 4. Emphasizing speed and quantity may result in a decline in the quality of work and a loss of artistic depth and innovation.

5. The research contributed numerous design solutions that could enrich the visual identity of Egypt if it hosts international championships. 6. AI technology has significantly diversified the range of produced designs, providing an infinite number of design experiments and facilitating easy replacement and reformulation in various ways to achieve different outcomes.

Keywords :

Artificial intelligence, textile printing design, sports events, design process

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