

# **Bridging Cultures through AI Cinema: Audience Perception, AI Imagery, and Sustainable Education in *Life of Pi***

**Cindy Hsing-Yu Wang 王幸瑜<sup>1\*</sup>,**

**Vince Jia-Lin Lu 盧嘉麟<sup>2</sup>**

<sup>1</sup> General Education Center, Learning Center, Hsiuping University of Science and Technology <sup>1</sup>E-mail address: fish411@hust.edu.tw

<sup>2</sup> General Education Center, Learning Center, Hsiuping University of Science and Technology  
<sup>2</sup>E-mail address: vincelu@hust.edu.tw

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## **Abstract**

### **Research Overview**

This paper investigates the role of artificial intelligence (AI) as a catalyst for smart sustainability within creative industries, using the film *Life of Pi* as a focal case study. By analyzing the evolution of audience reactions—from initial criticism to subsequent appreciation upon discovering that the tiger was digitally created—this study demonstrates how AI can facilitate green innovation in the film industry. Marshall (2017) noted that “according to *Life of Pi* visual effects supervisor Bill Westenhofer, almost 86% of the scenes featuring Richard Parker use a computer-generated tiger.” This integration of AI in creative production not only addresses ethical concerns related to animal welfare but also exemplifies the potential of digital technologies to promote cross-cultural knowledge co-creation and global discourse on sustainability. In particular, this research highlights the ways in which AI-enabled filmmaking challenges conventional production practices while simultaneously aligning with broader environmental and social objectives. Through this lens, *Life of Pi* serves as a representative example of how advanced computational tools can transform both the creative and operational dimensions of film production, fostering practices that are both ethically responsible and environmentally sustainable.

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\* Corresponding author, e-mail: fish411@hust.edu.tw / vincelu@hust.edu.tw

## **Purpose of Study**

The primary objective of this study is to examine how artificial intelligence contributes to sustainable practices in filmmaking and the broader creative industries. Specifically, the study explores how AI facilitates green innovation by reducing the environmental footprint of film production, such as through the elimination of live animal use and the minimization of resource-intensive production processes. In addition, this research investigates audience perceptions of AI applications, particularly how cultural and ethical interpretations evolve when viewers become aware of the technological interventions involved. By linking technological adoption to sustainability outcomes, this study seeks to provide insights into how AI can serve as a strategic tool for creative industries that aim to align with the United Nations Sustainable Development Goals (SDGs), including responsible consumption, ethical production, and the promotion of inclusive, cross-cultural engagement. Ultimately, the study aims to bridge the gap between technological innovation and socially conscious audience reception, highlighting the interplay between AI, ethics, and sustainable creative practices.

## **Research Methods**

This study adopts an integrative research approach that combines multiple analytical methods to develop a comprehensive understanding of AI's role in sustainable filmmaking. Film analysis is conducted to examine the visual and narrative techniques employed in *Life of Pi*, with particular attention to the depiction of the digitally created tiger and its surrounding cinematic environment. Media discourse analysis is used to trace audience reactions and critical commentary across various platforms, including online forums, film reviews, and social media discussions, in order to explore how perceptions of AI-driven ethical practices evolve over time.

In addition, a sustainability framework evaluation is applied, drawing on the principles of the United Nations Sustainable Development Goals (SDGs), particularly SDG 12 (Responsible Consumption and Production), SDG 9 (Industry, Innovation and Infrastructure), and SDG 13 (Climate Action), to assess the environmental and ethical

implications of AI integration in filmmaking. By integrating these approaches, the study provides a multidimensional perspective on how AI innovations contribute to sustainable production practices, technological advancement, and environmental responsibility, while also being perceived, implemented, and socially mediated within global creative industries.

## **Results and Discussion**

The results indicate that the use of AI-generated animals in *Life of Pi* significantly reduces the need for live animal involvement, thereby minimizing ethical concerns and lowering the environmental impact associated with animal management, transportation, and habitat maintenance. Audience perception studies reveal an initial skepticism and criticism toward the use of digital technology; however, once viewers learned about the AI-generated tiger, appreciation for the film's ethical and sustainable practices increased markedly. This shift in audience perception underscores the importance of transparency and education in fostering public recognition of sustainable innovations. Moreover, the study demonstrates that AI not only transforms production processes but also shapes cultural and ethical narratives, encouraging audiences to reconsider traditional assumptions about authenticity, creativity, and responsible filmmaking. These findings highlight the potential of AI as a driver of environmentally responsible innovation, offering a model for other creative sectors to integrate technology in ways that promote sustainability, ethical standards, and global knowledge exchange.

In conclusion, AI in filmmaking, exemplified by *Life of Pi*, represents a pivotal development in the pursuit of smart sustainability within creative industries. By reducing ecological footprints, enhancing ethical practices, and facilitating audience engagement with sustainability narratives, AI emerges as a transformative tool that bridges technology, culture, and environmental responsibility. The study provides a framework for understanding how creative industries can leverage AI to advance both innovation and sustainable development goals, reinforcing the role of technology in shaping a more ethical and environmentally conscious future.

## **Keywords**

artificial intelligence; green innovation; sustainability; SDGs; creative industries

## **References**

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