# H&M leads fast fashion’s ethical crossroads with digital twin models



Fast fashion companies like H&M are increasingly integrating "digital twin" technology into their marketing and design processes, creating lifelike AI replicas of real human models. This innovative approach debuted recently with H&M's initiative to clone 30 actual models, utilising a sophisticated combination of full-body scanning and voice modelling. These digital avatars are intended not just for product promotion but also for interaction with consumers and virtual modelling of clothing, signalling a significant shift in how fashion brands engage with their audience.

The trend towards using digital twins raises important questions surrounding equity, identity, and environmental responsibility. Scholars like Jul Parke, a PhD student at the University of Toronto, have highlighted the necessity for regulatory frameworks that ensure fair compensation for individuals whose likenesses are used. As this technology progresses, the ramifications for the labour force in creative industries could be substantial, particularly for models, photographers, and influencers who might see their roles diminished in favour of these digital doubles.

Concerns have been amplified by the broader implications of fast fashion, an industry notorious for its environmental footprint—producing over 92 million tons of textile waste annually. While the introduction of AI models could theoretically enhance operational efficiency and reduce waste, it also risks further entrenching the practices of overproduction and rapid consumerism. Fast fashion firms like Heron and Zara, while exploring AI to streamline their offerings, still face criticism for prioritising profit over sustainability and ethical practices.

In addition to environmental concerns, the ethical dimensions of employing digital twins cannot be overlooked. Although some models may maintain ongoing compensation and rights associated with their digital likenesses, the overriding industry norms regarding pay and the treatment of likenesses remain inconsistent. Initiatives by companies like Levi Strauss to enhance diversity and inclusivity through AI modelling do exist, yet they often grapple with accusations of "simulated diversity"—where AI models portray varied body types while failing to address the real-life experiences of human models.

Industry experts, including advocates from the Model Alliance, are calling for clear regulations to oversee the use of AI in fashion, aimed at safeguarding models' rights and ensuring ethical standards in technology implementation. The rapid integration of digital clones poses a potential threat to traditional models, particularly those who may not have substantial online followings or industry clout to negotiate their rights effectively.

Moreover, consumer awareness will play a pivotal role in shaping the future of this trend. Encouraging shifts towards sustainable practices, such as thrifting and purchasing secondhand garments, can mitigate the environmental impact of the fast fashion industry. By opting out of fast fashion—a sector already riddled with exploitative practices—consumers can drive demand for more ethical alternatives.

As H&M and other fast fashion giants continue to explore the realms of AI and digital twins, both opportunities and ethical challenges lie ahead. The need for comprehensive legal frameworks to protect the rights of models and ensure fair compensation will be crucial in navigating this evolving landscape. Ultimately, the decisions taken today will have a lasting impact on the industry's trajectory, marking the balance between innovation and responsibility.

### Reference Map

1. Paragraphs 1, 2, 3, 4, 5, 6, 7.
2. Paragraphs 1, 2, 3, 6.
3. Paragraphs 3, 4, 5.
4. Paragraphs 2, 4, 6.
5. Paragraphs 1, 4, 6.
6. Paragraphs 1, 4, 6.
7. Paragraphs 1, 3, 4, 7.

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## Bibliography

1. <https://www.thecooldown.com/green-business/digital-twin-ai-fashion-industry-hm/> - Please view link - unable to able to access data
2. <https://apnews.com/article/aaa489111bd8e793aa6e5a531dc7ade2> - This article discusses the potential of AI-generated models to revolutionize the fashion industry by enhancing diversity and reducing waste. It highlights the experiences of London-based model Alexsandrah and her AI-generated twin, noting that while AI models can offer more tailored shopping experiences and represent diverse body types, there are concerns about the displacement of human models and the ethical implications of using AI to simulate diversity without true representation. Companies like Levi Strauss have faced backlash for their AI initiatives but emphasize that these pilots are not intended to replace human models. The Model Alliance is advocating for regulations to ensure ethical and transparent use of AI in fashion, protecting models' rights. The future of AI in fashion remains contentious, hinging on responsible implementation and safeguarding diversity and inclusion.
3. <https://time.com/7022660/shein-ai-fast-fashion/> - This article examines the impact of artificial intelligence (AI) on the fast fashion industry, focusing on the Chinese retailer Shein. Shein uses AI to adapt quickly to customer demand, listing up to 600,000 items on its platform and serving customers worldwide, but it has faced criticism for environmental damage and labor rights violations. AI has potential benefits, such as reducing inventory waste by predicting demand, but it can also drive overproduction and consumption. Shein and other companies like H&M and Zara use AI to streamline operations and increase efficiency, potentially adding significant profits to the sector. Critics argue that AI must be paired with ethical standards to prevent negative environmental and social consequences. There are also concerns about AI's role in design theft and potential bias, which require careful regulation and responsible implementation.
4. <https://www.sohu.com/a/877335283_122342248> - This article discusses H&M's plan to create digital clones of its human models using AI technology. The company aims to produce 30 digital twins by the end of the year, with models retaining rights to their digital representations. The initiative has sparked discussions about the intersection of AI and workers' rights, raising questions about consent, compensation, and the future of employment within the fashion industry. Critics express concerns about the potential displacement of workers and the need for protective legislation to ensure fair compensation and rights for models.
5. <https://fashionunited.uk/news/fashion/h-m-to-create-twins-of-models-with-ai-the-possibilities-are-almost-endless/2025032880819> - This article reports on H&M's plan to create digital 'twins' of real models using AI technology. The AI-generated models will be used for marketing campaigns and social media posts, with the models' consent. Thirty models, including Mathilda Gvarliani, have already given their permission. The decision has been met with both enthusiasm and criticism, with concerns about the potential impact on the fashion industry and the need for protective legislation to ensure fair compensation and rights for models.
6. <https://www.standard.co.uk/lifestyle/fashion/h-m-ai-digital-twin-model-b1219273.html> - This article discusses H&M's plan to use AI to create digital versions of 30 real-life models for its advertising materials. The AI-generated models will be used for marketing campaigns and social media posts, with the models retaining rights to their digital likeness. The initiative has sparked discussions about the potential impact on the fashion industry and the need for protective legislation to ensure fair compensation and rights for models.
7. <https://www.pymnts.com/artificial-intelligence-2/2025/digital-doppelgangers-hm-explores-ai-digital-twins-for-fashion-retail/> - This article examines H&M's use of AI-generated avatars, marking a shift toward greater efficiency in fashion marketing. The initiative enables faster campaign turnarounds and significant cost savings, enhancing creative flexibility. However, questions remain about whether AI replicas will evoke the same emotional resonance as real people among consumers. The article also discusses the importance of clear legal frameworks to cover issues such as contracts, licensing, and protections against unauthorized modifications for digital twins.