

Chapter 5


Ethical Personalisation in Fashion E–Commerce: Leveraging AI for Sustainable Consumption

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ABSTRACT

This chapter explores the ethical implications of AI-driven personalization in fashion e-commerce and proposes an “Ethical Personalization Framework” that balances commercial success with societal and environmental responsibility. It critiques conventional personalization systems for promoting impulsive buying and unsustainable consumption. Drawing from ethical theories—Virtue Ethics, Utilitarianism, and Deontology—and case studies like Patagonia and Zalando, the chapter outlines principles of fairness, transparency, user autonomy, privacy, and sustainability. It recommends operational strategies and policy interventions for retailers, developers, and regulators to embed ethical design in AI systems, thereby supporting responsible consumption and aligning fashion retail with the UN Sustainable Development Goals.

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1. INTRODUCTION

The apparel retail industry is facing a tremendous digital revolution fuelled by AI adoption in e-commerce channels. In the past decade, AI has transitioned from a buzzword to a strategic imperative for international retailers. Of all its uses, personalisation has become an effective agent for improving customer engagement, conversion, and loyalty. Personalization on the online fashion front means product, service, and experience tailoring to the individual's requirement by recommendation systems powered by AI. They scan customers' data—search history, purchases, and demographics—to provide personalized recommendations, prices, and offers. Leaders such as ASOS, Zalando, and Net-a-Porter set the tone, delivering ease-of-use, user-friendly shopping experiences. Where this creates business value, it does so with moral and sustainability considerations. They are led primarily by short-term profitability alone in most such systems, encouraging impulse buy and subsidizing fast fashion, as contrasted with climate goals and circular economy strategies. Studies reveal this double-edged sword—AI can streamline operations and build loyalty but also trigger overconsumption and ignore the planet.

The chapter focuses on the key question: How can AI fashion online shopping personalisation be re-conceptualised to promote more ethical and sustainable consumption? The discussion intersects AI ethics, marketing, and sustainability, highlighting that technology needs to be balanced with social and environmental obligations. As Millennial and Gen Z care about sustainability, brands are compelled to marry ethics and digital strategy. The chapter speculates ethical personalisation from multidisciplinary literature and critiques problems such as bias, privacy, manipulation, and loss of autonomy. It contends that AI can both mirror and shape greener consumer behaviour. In support of students with this, the chapter presents the cases of Patagonia, Zalando, and ThredUp, showing how sustainable products would be guaranteed through AI. With Virtue Ethics, Utilitarianism, and Deontological Ethics as its foundation, it deconstructs these models and learns lessons for ethical AI design. One of the key outputs is the Ethical Personalisation Framework, combining academic expertise and best practice. It provides a set of principles and design guidance for policy-makers, developers, and retailers—prioritizing justice, transparency, user control, and sustainability and aligning with the UN SDGs and circular fashion. Lastly, the chapter establishes governance strategies, regulation requirements, and avenues of future research to disentangle AI's impact on sustainability. Integrating ethics into fashion personalization, the chapter offers theory- and practice-informed insights to support ethically informed, sustainable consumption in the digital marketplace.

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