A Review on Application of Artificial Intelligence in Fashion and Apparel Industry

NTD Dharmasiri[1#] and B Hettige[2]

[1]*Department of Computer Science, General Sir John Kotelawala Defence University, Sri Lanka*
[2]*Department of Computer Engineering, General Sir John Kotelawala Defence University, Sri Lanka*

#37-ce-0006@kdu.ac.lk

Dressing or clothes is a fundamental need of human beings that are not limited to a particular gender. Hence, fashion design is a very demanding industry that involves many of the concepts, requirements, and demands of human beings. An area like this, which has a huge involvement of people, requires some sort of technology to solve its problems and give the best service to the consumers. So, like every other industry, the fashion and Apparel industry also has some issues such as high production costs, wastage, customer dissatisfaction, and environmental pollution. In order to address these issues, Artificial Intelligence based technologies have been used, including Machine Learning, Decision Support Systems, Expert Systems, Optimization, and Image Recognition & Vision. This review presents different research on Artificial Intelligence-based technologies and issues related to the fashion industry. Based on the operational procedures, this study's concerns are also divided into four areas, such as apparel design, production, retail, and supply chain management. In addition to that, big data helps Apparel e-commerce retailers provide personalized offerings to customers. Machine learning and image processing techniques are commonly used to develop data-driven solutions using product-related data provided by Apparel product manufacturers & designers, and also, these technologies help the supply chain to improve business operations.

Keywords: *fashion designing, artificial intelligence, big data analytics*