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Artificial Intelligence Enabled Fashion Forecast System: A Demand Centric Approach

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Abstract

Fashion and its supply chain are notorious and complex. The issue of gargantuan amounts of fashion items making its way to the incinerator or landfill is well established. One of the primary reasons for this colossal waste generated by the fashion industry is how it has traditionally operated to forecast and produce. With constantly changing fashion seasons, demand fuelled by ephemeral trends and fashion disruptions, making an accurate assortment plan has always been challenging for the brands. The challenge is in two key decisions the industry takes, firstly, what trend / product to make? And then how much to make? Traditionally the decisions are largely intuitive plus own data of the brand. A new way to solve this has emerged which is putting consumers at the centre. A demand-centric approach to solving the challenge using advanced artificial intelligence (AI) algorithms and big data at internet scale. This statistical research paper is part of ongoing research which explores the AI and ML based approach that has been road tested across global brands and retailers in accurately predicting buying and assortment plans of fashion brands. The case study of Stylumia investigates how AI enabled forecasting systems where the subtle changes in consumer interest can be predicted by advanced algorithms deployed on various online tools. The research also documents how these tech tools have been effectively used in reducing carbon footprint by up to 30%. It is also noted that technological tools are instrumental in recording and reducing the ecological impact of fashion production systems and increased transparency.

Keywords: artificial intelligence; attributes; demand sensing; forecasting; sustainability.

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