

**FASHIONSIGHT: A FINE-GRAINED CLASSIFICATION
SYSTEM FOR FASHION ATTRIBUTES IN IMAGES**

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Abstract

The fashion industry is a fast-moving industry where trends change within weeks. It is crucial for apparel manufacturers to sell clothing with trending styles while they are still in trend. If not, they are often incapable of selling the manufactured garments, even after price markdowns. The process an apparel manufacturer follows starts with the identification of trends and predicting what a customer would want to buy. This is followed by designing, manufacturing, and finally delivering the finished garments to the retailer. The lower the time between trend identification and selling, the higher the chance of the products getting sold. This research provides a solution to cutting down this time lag, by making the trend identification process faster and more efficient.

With the availability of many online platforms that allow users to upload text, speech and images on to the internet, there is an abundance of information available for data mining and machine learning purposes. This research is based on the fact that the latest images uploaded by internet users/celebrities could be utilized to identify trends. This thesis contains all the steps and procedures followed towards the development of a complete trend identification solution that obtains images, identifies clothing attributes, predicts the “trendiest” attributes, and displays them to the user.

The system developed in this research (Fashionsight) analyses images based on three algorithms. The first algorithm minimises noise in images, the second performs feature extraction and fine-grained classification, and the third identifies trends. All three algorithms have been developed by the author. This system achieved a classification performance that is on par with other state-of-the-art research. , Since the architecture that was developed is novel to this space, there is potential for even further improving overall classification performance.

Keywords: Fine-grained Image Classification, Convolutional Neural Networks