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Automatic fashion recommendation system

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The fashion industry has a clear opportunity to act differently, pursuing profit and growth. The female fashion industry is one of the industries that quickly changes. By using social media, an idea about the changes and the new trends in the female fashion industry can be taken. The findings of this study contribute to a better understanding of the fashion industry by providing current trends in clothing types and colors. It allows the fashion industry's garments to guide the industry in times of need, resulting in a better trend for the industry. To provide a solution for the female fashion industry to gain an understanding of the trend of clothing types and colors in female fashion. The proposed platform has been implemented using techniques such as web scraping and *Convolutional Neural Networks (CNN)*. In the proposed solution, first, download the images from *INSTAGRAM* using *web scrapping*. After that, the female images were filtered by applying a CNN using the *Keras* library. Then cloth type and cloth color are predicted by two different CNN algorithms. The system presents the predicted result using *Graphical User Interface (GUI)*.Using that can give quick results of the changes in the female industry using this platform. According to the findings, the percentages of accuracy were recorded as 82.0% for female image filtering, 83.2% for clothing type in the fashion industry, and 80.2% for clothing color prediction respectively. The predictions were made in less than 0.5s, hence the proposed system is useful for providing instant changes to female fashion trends to the fashion industry with high accuracy. With the results of this study, It can be concluded that the developed model provides a reliable and accurate platform to gauge multiple gradients of current trends in the female fashion industry based on the Sri Lankan actresses' images on Instagram.

Keywords: Convolutional Neural Networks, Fashion MINIST, Female image classification, Web Scrapping