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| <b>Date</b>          | 17 September 2022                     |
| <b>Team ID</b>       | PNT2022TMID25045                      |
| <b>Project Name</b>  | Smart Fashion Recommender Application |
| <b>Maximum Marks</b> | 4 Marks                               |

| TITLE   | AUTHORS  | TECHNOLOGY  | ADVANTAGE  | DISADVANTAGE   |
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|   | Samit Chakraborty, Md. Saiful Hoqu, Naimur Rahman Jeem, Manik Chandra Biswas, Deepayan Bardhan and Edgar Lobaton | This paper presents a review of the fashion recommendation systems, algorithmic models and filtering techniques based on the academic articles related to this topic  | The technical aspects, strengths and weaknesses of the filtering techniques have been discussed elaborately.   | The proposed prototypes should be tested in commercial applications to understand their feasibility and accuracy in the retail market, because inaccurate recommendations can produce a negative impact on a customer. |
| <b>Design of Garment Style Recommendation System Based on Interactive Genetic Algorithm</b> | Yan Zhao   | In this paper, the clustering analysis subsystem based on the genetic algorithm is innovatively introduced into the traditional collaborative filtering recommendation system, and its design and implementation are given. | The recommendation quality of the collaborative filtering recommender system based on genetic clustering is basically not degraded compared with that of the traditional collaborative filtering recommender system. | Collaborative filtering is unable to discover the latent association between synonyms, so it will treat these products differently.  |

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| <b>Toward Fashion-Brand Recommendation Systems Using Deep Learning: Preliminary Analysis</b>      | Yuka Wakita , Kenta Oku, and Kyoji Kawagoe  | The preliminary analysis shows that the fashion-brand recommendation method using deep learning can dramatically improve the recommendation accuracy as compared with other machine learning methods.   | The brand concept includes realistic settings, such as the age group, price range, and unique character of the brand, which allows target user segmentation. | It is unclear that the model can be applied in fashion-brand recommendation, because the number of favourite brands.   |
| <b>Advanced Fashion Recommendation System for Different Body Types using Deep Learning Models</b> | Seema Wazarkar <sup>1</sup> , Shruti Patil, Pratik S. Gupta, Kriti Singh, Mukund Khandelwal, C.V. Sri Vaishnavi, Ketan Kotecha <sup>2</sup> | In this paper, an improved recommendation system is developed using a deep learning model for customers with different body shapes/types. It helps users to select clothing items based on their body shape.  | This paper plans to provide recommendation completely based on body type. Therefore, proposed work is able to provide a personalized recommendation.         | This work would have been better and enhanced to predict fashion items based on the skin color and weather conditions than only recommending dress based on size       |
| <b>Adaptable Recommendation System for Outfit Selection with Deep Learning Approach</b>           | Laura J. Padilla Reyes, Natalia Bonifaz Oviedo, Edgar C. Camacho, Juan M. Calderon  | The adaptive system capacity is given by two phases. The first one generates a short-term memory that is constantly updated with the user's interactions. The second one creates a long-term memory based on a DNN. The recommendation system is structured | This focuses on fashion design decisions and possibly reduce the production cost of new garments since it would have such fashion style of each population.  | This provides outfit recommendation to the user based on the previous user selection and thus the system lacks in Recommending Personalized fashion goods to the user. |

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| <b>Fashion recommendation system using CNN</b>                                  | Anjan M.<br>Abhishek V.<br>C. Balamanikantan<br>Dheeraj<br>Dr. Venugeetha Y. | This paper had come up with an idea to build a content-based recommendation system using ResNet-50 convolutional neural network.   | The engine is able to intelligently select which algorithms and filters to apply in any given situation, for any given individual shopper. This means that the marketers can maximize conversions and average order value. | In this study, we reach to 98% accuracy on colour prediction, 86% accuracy on gender and cloth's pattern predictions and 75% accuracy on clothing recommendation. Though the proposed model reaches higher accuracy on colour prediction it gives only 75% accuracy on clothing recommendations |
| <b>Personalized fashion recommender system with image based neural networks</b> | M Sridevi,<br>N ManikyaArun<br>M Sheshikala<br>Sudarshan E                   | This project aims at using an image of a product given as input by the user to generate recommendations since many-a-time people see something that they are interested in and tend to look for products that are similar to that. It uses neural networks to process the images from Deep Fashion dataset and a nearest neighbour backed recommender to generate the final recommendations. | This paper, had presented a novel framework for fashion recommendation that is driven by data, visually related and simple effective recommendation systems for generating fashion product images.                         | This paper lacks concentration in size of the dress the user would fit into.  |

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| <b>A Review of Modern Fashion Recommender Systems</b>             | YASHAR DELDJOO<br>FATEMEH NAZARY,<br>ARNAU RAMISA,<br>JULIAN MCAULEY,<br>GIOVANI PELLEGRINI,<br>ALEJANDRO BELLOGIN,<br>TOMMASO DI NOIA, | The goal of this survey is to provide a review of recommender systems that operate in the specific vertical domain of garment and fashion products. They have identified the most pressing challenges in fashion RS research and created a taxonomy that categorizes the literature according to the objective they are trying to accomplish. | Effective fashion RS can have a noticeable impact on billions of customers' shopping experiences and increase sales and revenues on the provider-side.  | The fashion industry has a wide catalogue of diverse items and a high rate of change or return as a result of market dynamics and customer preferences. This results in a lack of purchase data, which complicates the use of standard recommender systems. |
| <b>DIVERSITY IN FASHION RECOMMENDATION USING SEMANTIC PARSING</b> | Sagar Verma Sukhad<br>Anand Chetan Arora<br>Atul Rai  | This paper proposes to recommend images by explicitly learning and exploiting part-based similarity. It proposes a novel approach of learning discriminative features from weakly-supervised data by using visual attention over the parts and a texture encoding network.  | This paper has presented a novel attention based deep neural network which learns to attend to different semantic parts using the weakly labelled data. | Suggesting multiple images where each output image is similar to the query image on the basis of a different feature or part is one way to mitigate the problem.  |

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| <b>Content-based Clothing Recommender System using Deep Neural Network</b> | Narges Yarahmadi Gharaei,<br>Chitra Dadkhah,<br>Lorence Daryoush | The proposed system solves the cold start problem for new items by considering their features. This proposed system uses the DNN for extracting the features from the image. | Recommending serendipitous item is one of the benefits of the proposed system. Also, it has high speed due to its simplicity. | The system is evaluated using feedbacks from real users using precision metrics and the results show that the system is both efficient and precise with 73.7% precision which is comparatively, better than other models. Also, the accuracy of the model in article detection is only 66% |
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