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A Review Paper on Product Recommendation System Using Online Reviews

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Abstract: *In today's modern epoch of information technology, the idea of efficiently finding one's favourite product in a large dataset of application database, becomes an essential issue to address for the online content providers in order to attract the masses. Recommendation systems play a major role in today's ecommerce industry. They recommend items to users such as clothes, books, movies, videos, electronic products and many other products in general. Now-a-days the social network environments are trending to list the customers with the product recommendations. The social recommendations are generated by recommender system based on product ratings and comments and the opinions of the people. Recommendation System belongs to the class of Information Retrieval, Data Mining and Machine Learning. Recommender systems help the users to get personalized recommendations, helps users to take correct decisions in their increase sales online transactions, and redefine the users web browsing experience, retain the customers, enhance their shopping experience. The information overload problem is solved by search engines, but they do not provide personalization of data. Recommendation engines provide personalization. In this system, users find and select items for example clothes, hotels, books, movies, restaurants from a huge number available on the web or other information sources. Given a large set of items and a description of the user's needs, they present to the user a small set of the items that are well suited to the description. Customer reviews, their opinions and shared experiences in the use of a product is a powerful and useful source of information about consumer preferences that can be used in recommendation systems. This work presents a technique that integrates information from production images and the description of the product to match a set of products collected in a database..*

Keywords: Recommender System, Data Mining, Machine Learning, Database

I. INTRODUCTION

In recent years, E commerce websites has been improved its profit margin with the help of recommender systems. Most of the decisions people make are based on suggestions or recommendations coming from people experiences or from the Internet. Recommendation systems make the process easier to assist people regarding their preferences. A recommender system is a customized information filtering technology that can be used to predict the user interest to particular product or certain product will be liked by the customer. The recommender system mainly helps in improving user experience which in turn will impact the commercial sales in the website. Online shopping is of the activities that people tend to do and has been increasingly gained more attention among social activities. The increasing of shopping online activities brings a lot of information and management systems. On social networking sites, people share a lot of information in the form of images, opinions, ideas, etc. In many cases, they share their own experiences about a product or service and these online opinions are valuable as they play an important role in influencing a consumer buying decisions especially in online shopping. A lot of research is currently happening to extract opinion insights. Customers prefer to purchase new products in colour or pattern to be compatible with existing products. In online shopping, it takes a lot of time to search for all compatible products. Automated recommendation systems can speed up finding a wide variety of patterns that customers are interested in. The use of recommendation systems is increasing day by day, as it helps consumers effectively scan a huge number of products online and identify the right products that meet their

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need. Recommender systems aim to predict users' interests and recommend product items that quite likely are interesting for them. They are among the most powerful machine learning systems that online retailers implement in order to drive sales. Recommendations typically speed up searches and make it easier for users to access content they're interested in, and surprise them with offers they would have never searched for.

II. Literature Review

[1].Paper Name: Virtual reality and recommendation system to design mobility system
Author: A. Gabriel, M. Ortiz
The generalization of policies for active mobility urges the importance of correctly design the system of mobility. The success goes through the consideration of end-user needs. However, there is always a gap between the needs of the users and reality.It presents a work in progress in the experimentation of using recommendation system with VR during the design process.
[2].Paper Name: Enhanced Product Recommendations based on Seasonality and Demography in Ecommerce
Author: Keerthika K, Saravanan T
The diversity of user demographic in social network makes the recommendation system to introduce variety of product recommendation. The seasonality of product is emerging trend in recommendation system to actively find out the right product at right time. The work focuses on finding the efficiency of recommender system, in generating the diverse suggestions for E-commerce dataset.1.In this first the orduct is being distinguished. 2. Later the user relation is been identified with seasonality. 3.Lastly, the impact of seasonal product in generating recommendation is analyzed.
[3].Paper Name: A Recommendation System for Online Purchase Using Feature and Product Ranking
Author:-Karthik R. V, Sannasi Ganapathy, Arputharaj Kannan
In this they have proposed a new algorithm called Feature Based Product Ranking and Recommendation Algorithm (FBPRRA) for providing suggestions to the customers whose are interested in purchasing good quality products. The proposed algorithm analyzes online products and ranks them according to product reviews. Finally, it recommends the suitable product.

III. Proposed Work

In the Product Recommendation using Image and Text Processing information, is extracted from a product i.e the image and text information and used to match with the information of products stored in a databases. The product is associated with lot of information. In this, image and descriptions are used as the main source for implementing a product recommendation system. information is extracted from the product images using HOG, Shape Context and Hu Moments.

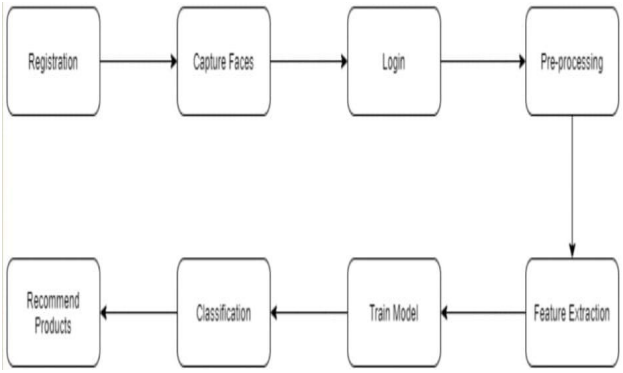

Figure 1: Functionalities of modules

The description of product is merged and embedded using a sentence embedding technique. The next process is in which the product is matched using template matching method. In the Online Recommendation System Using Deep Learning for Textile Products system, the required product's image is uploaded by the consumer in the search box of the application and then system works accordingly and matches the uploaded picture with the nearest match and

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displays all the results to the consumer in the result section. The combined image of the product is sent to the deep learning algorithm and hence results are shown. The Recommendation System for Online Purchase Using Features and Product Ranking is also called Feature Based Product Ranking and Recommendation Algorithm (FBPRRA). It is developed for recommending products on the basis of analysis report of consumer feedbacks. In this , they recommend products on the basis of online reviews for purchase by considering details about consumers who have purchased and to whom it was purchased.

IV. Conclusion

Recommendation systems help users discover items they might not have found by themselves and promote sales to potential customers, which provide an effective form of targeted marketing by creating a personalized shopping experience for each customers. These systems help users find items they want to buy from a business. Recommender systems benefit users by enabling them to find items they like. Conversely, they help the business by generating more sales.

V. Acknowledgement

We are very thankful to our Prof. Manisha Singh for her continuous guidance and support throughout the project and having firm believe in us. Also, we would like to thank her for monitoring the progress of the project and their valuable time. We are dearly obliged to our ma'am for giving us an opportunity to work on this project which has provided valuable information about our project as well as machine learning. I would like to extend my deep appreciation to all my group members, without their support and coordination we would not have been able to complete this project.We were able to successfully complete this project with the help of their guidance and support.

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