

Panda Mall

Project Proposal

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# Abstract

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# Introduction

# Goals and Objectives

With the recent COVID-19 situation and lock downs around the globe, the shopping mode has also changed. The number of online fashion stores has increased which has enhanced the competition among them. Recommendation system is an e-commerce tool, which helps consumers search based on knowledge that is related to a consumer’s choices and preferences [1]. The primary objective of this project is:

* To design a user-friendly website that helps in recommending the best clothing item for the user.
* To provide a platform where items of multiple stores are listed and recommend the one of buyer’s interest.
* To use recommendation systems such as collaborative filtering and produce efficient and effective recommendations.
* To recognize correspondence between the user ratings and response to improve results.
* To maintain the user profile and improve the future recommendations.

# Scope of the Project

This project will consist of creating an e-commerce website for the fashion stores. User can register on the website. With the account user can search a clothing item of his/her interest. The items can be filtered with the various options size, color and preferred store etc. Items displayed on the result query will filter through the options and by using Machine learning algorithm it will filter the best recommended product for the user. On the selection of the product the link will be redirected to the original store website. On the purchase of that product user will be reminded to fill out the response and rate the purchase made. The algorithm takes into account the user history and preferences based on the search and response results. Moreover, products of limited stores will be displayed but an option will be provided for the stores to register their store through a specific criterion.

# Initial Study and Work Done so Far

In the past few years due to growth in online clothing stores few personalized clothing recommendation systems have been produced by implementing several different algorithms. Hu et al. [2] researched on personalized clothing recommendation systems. He presented a functional tensor factorization approach to describe user-item and item-item interaction. Nogueira et al. [3] proposed a new collaborative filtering algorithm for better accuracy in clothing recommendation systems. After a lot of research, we have inclined towards collaborative filtering method for our recommendation system as we have found it more effective and accurate in these types of recommendation systems. Landia in [4] explains challenges faced during construction of fashion recommendation system. He has organized challenges into two categories namely retailer related and customer related. The prior consists of short lifetime of items and high volume of items, whereas seasonality and rapidly changing customer preferences make up some of the customer related challenges. Majority of the recommendation systems deal with products from a single clothing store unlike our system which will deal with different type of clothes from different clothing stores.

# References

1. Schafer, J.B. Konstan, J. Riedl and J. (Eds.), “Recommender Systems in E-Commerce,” in Proceedings of the ACM Conference on Electronic Commerce, Denver, CO, USA, 3–5 November 1999; ACM Press: New York, NY, USA, 1999.
2. Y. Hu, X. Yi, and L. S. Davis, “Collaborative fashion recommendation: A functional tensor factorization approach,” in Proceedings of the 23rd Annual ACM Conference on Multimedia Conference, 2015.
3. E. A. Nogueira, E. V. De Melo, E. R. De Faria, and D. Guliato, “IKB-MS: A collaborative filtering approach associated with human visual attention for clothing recommendation,” in Proceedings of the 21st Brazilian Symposium on Multimedia and the Web, WebMedia 2015, pp. 149-156, October 2015.
4. N. Landia, “Building Fashion Recommendation System”, *dressipi.com*, Apr. 19, 2018. [Online]. Available: <https://dressipi.com/blog/building-fashion-recommendation-systems/>. [Accessed Sept. 27, 2021].