



# Survey on Hybrid Filtering Based Book Recommendation System

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**Abstract:** The data available online, helps users to get information about anything of his/her interest. But since the data is huge and complex, it is difficult to get useful information from its Recommender System are effective software techniques to overcome this problem. Based on the user's and item's information available, these techniques provide recommendations to users in their area of interest We are using two algorithm Euclidean distance and Cosine similarity to recommend books. In future, this work can be extended to recommend books with higher performance by adding big data tools. People find it difficult searching for books based on their preferences or choices were searching is done through various sites on the internet and finally determines which book is appropriate for buying or reading or referring to, which is a very tedious job. In this project we use Artificial intelligence to provide easy access to all the people who are in search of different varieties of books by providing them with recommendations, based on their reviews, likes, preferences using hybrid-based filtering techniques. It is specially designed to collect, record, store, count and display results accurately. This machine allows users to get the best book recommendation based on their preference with high accuracy.

**Keywords:** Personalize, Book Recommendation, Euclidean, cosine similarity

## I. INTRODUCTION

People find it difficult searching for books based on their preferences or choices where searching is done through various sites on internet and finally determines which book is appropriate for buying or reading or referring to, which is a very tedious job. In simple words, a recommendation system is any system that automatically suggests content for website readers and users. These systems were evolved as intelligent algorithms, which can generate results in the form of recommendations to users.

## II. RELATED SURVEY

Nowadays tonnes of data is available online for users to get information about anything but the data is huge so it's difficult to get the correct information, a recommender system is basically a sub class of information filtering system that gets predictions or ratings and helps the user to get the correct information from this huge pile of data. Recommender system uses effective techniques and algorithms to get the correct information from huge dataset available online. The algorithms aims at recommending suggesting relevant elements [1].

Regular book readers find it difficult to search books which they want to read next as reading a book which is not of their preference will result in wasting their time and money as they'll be looking through various sites on internet or other sources which is a very tedious job. A recommender system will find the books based on their preference and save their time from doing this tedious job [2].

For correct recommendation and suggestion data filtering is very important, there are many methods for filtering we are using hybrid filtering for our survey. A hybrid filtering is a combination of content based filtering and collaborative based filtering it takes advantages of both the filtering technique and overcomes the disadvantages of both. We filter the books based on their ratings first for recommending only the top rated books to the users [3].

## III. METHODOLOGY

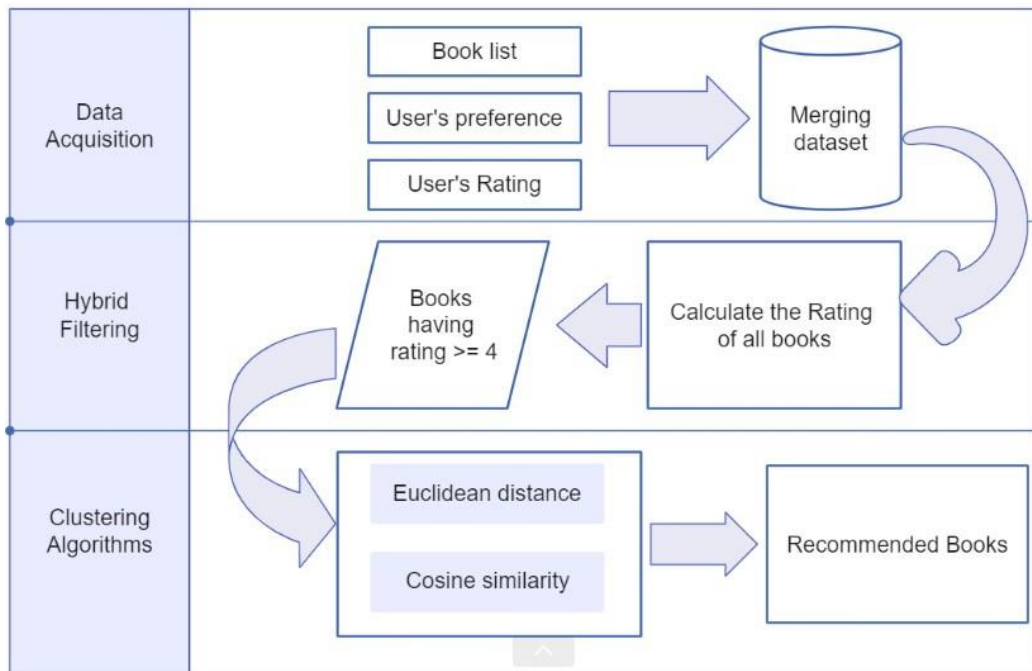
The basic methodology of whole model can be expressed as follows:

- The datasets of three csv files which were taken are Book list, User's preference, User's rating.
- These three datasets are taken then merged into a single csv file for better and easier access.



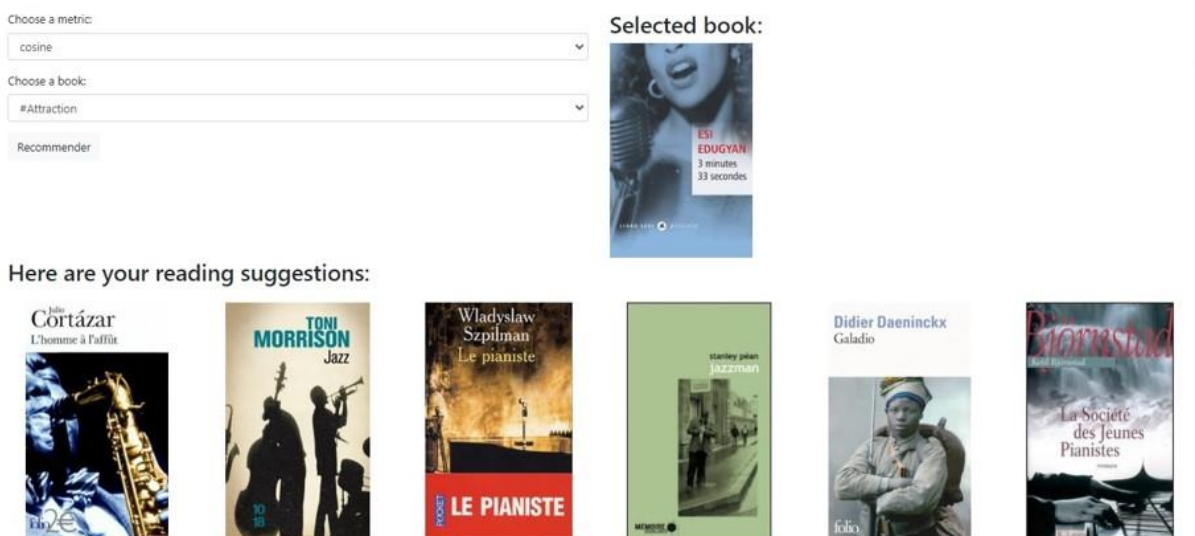
- Books having rating less than 4 are removed from the list as we want to recommend only the top rated books to the user.
- Hybrid filtering is applied on the user’s preference data using user’s rating.
- Euclidean distance and Cosine similarity algorithm are applied to get the recommended books
- Top 5 recommended books are displayed to user.

IV. FLOWCHART



V. RESULT

The system was able to successfully generate output to recommend books to the user with error free working. The user just needs to enter the metric and choose a book on which they want to get their recommendation and then the top five book will be displayed to the user using a flask framework web app. The system provides mostly accurate prediction for suggested books to the users.



**VI. CONCLUSION**

This project successfully developed a framework for recommending books based on user preference. The results are mostly accurate and satisfactory. The framework ability to recommend book is very good. There are still ways to improve this project using neural network and big data tools. We can also conclude that hybrid filtering approach overcomes the drawbacks of other filtering techniques. We aim to build a model which would give us more accurate recommendation results for recommending books in future.

**VII. REFERENCES**

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