



**RV College of
Engineering**

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Experiential Learning Phase 1: Presentation

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Book Recommendation System

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Introduction

Recommendation systems are used in hundreds of different services -everywhere from online shopping to music to movies.

For instance, the online retailer Amazon had a heavy hand in developing collaborative filtering algorithms that recommend items to users.

Music services like Pandora identify up to 450 uniquely identifying characteristics of songs to find music similar to that of their users' preferences.

Other music streaming services, such as Spotify, heavily rely upon the music selections of similar users to make weekly song recommendations and personalized radio stations. Netflix, a popular television and movie streaming service, uses these systems to recommend movies that viewers may enjoy. Radiation pattern synthesis is a critical task



Literature Review

Sr. No	Title of Paper and Year	Methodology	Findings
1.	Library Intelligent Book Recommendation System Using Facial Expression Recognitions 2020 IEEE	Convolution Neural Network Model	Obtain face image data through real-time cameras for analysis to determine user preferences. The books are recommended on user preference in recommendation system
2.	Book Recommendation Website with Chatbot - 2020 IEEE	Chatbot, named wannaRead, was developed by using Engati to created this chatbot[1) Testing search functions including a book list, a character list and a book category. 2) Keeping users' search log that they asked the chatbot about books but they did not know the book title they wanted. .
3.	Cloud Based Collaborative Filtering Algorithm For Library Book Recommendation System - 2020 IEEE	Collaborative Filtering Methodology	This helps preserve databases of whole book purchases available in the library
4.	DIGITAL LIBRARY USING HYBRID BOOK RECOMMENDATION ENGINE – 2019 IEEE	Hybrid Recommendation Engine	This web application will give recommendations to the user based on its past searches
5.	Enhancing the Performance of Library Book Recommendation System by – 2019 IEEE	Collaborative Filtering method.	This system is reliable and is mainly developed for colleges and schools where the users can borrow and return the books.

Motivation

To Recommend a book can help users discover books that align with their interests and preferences by analyzing user data such as reading history, ratings, and reviews, the system can provide personalized recommendations that increase user satisfaction and engagement. A book recommendation system can facilitate the formation of reading communities and foster social interaction among users. By recommending books based on what others with similar interests have enjoyed, readers can connect with like-minded individuals, join book clubs, and engage in discussions about their favorite reads. Design using Machine Learning is still not being used or implemented widely so doing a project on the same would enhance the learning.

Problem Definition

The challenges faced in the current is the "cold start" problem, which occurs when a recommendation system has limited or no information about a new user or book.

There are few or no explicit ratings or reviews for many books. This can make it challenging to accurately understand user preferences and provide relevant recommendations.

As the number of books and users in a system grows, scalability becomes a significant challenge Recommendation systems tend to focus on personalized recommendations based on user preferences. Lack of transparency in the recommendation process can make users skeptical or hesitant to trust the system.

Objectives

The objectives are:

- To provide personalized recommendations to users based on their individual preferences, reading history, and behavior.
- To help users discover new books and authors they may not have encountered otherwise
- To enhance user engagement by providing relevant and interesting recommendations.
- To boost sales or library usage.
- To improve overall customer satisfaction
- To introduce an element of serendipity.
- To foster long-term engagement with users, building loyalty and retention.

Research Methodology

The steps involved in the implementation of this project are:

1. Perform literature review on Book recommending using Machine Learning and look at the different works done in the respective field.
2. Go through the different Machine Learning approaches suitable for Book recommending design and optimization.
3. Find a data set for a patch books available online.
4. Identify the target audience, platform, and any specific requirements or constraints
5. Using suitable algorithms, develop a code using R or Python Programming language and implement them using Google Collab.
6. Draw conclusions based on the results obtained using the algorithm,.

Outcomes

The expected outcomes are:

- One of the primary outcomes of a book recommendation system is the delivery of personalized recommendations to individual users.
- A successful book recommendation system improves the overall user experience by providing relevant and engaging recommendations.
- By offering personalized and interesting book suggestions, a recommendation system can boost user engagement.
- A recommendation system that consistently delivers valuable and accurate recommendations can contribute to customer satisfaction and loyalty. .

Conclusion

The overall process of recommending books to the user of all age group category make use of collaborative filtering methodology where different users give ratings on the same book and the average number of rating is been calculated and the top-rated book is been recommended to the user. The system mainly focuses on the easy finding of best books which does not need much time or work.

The process of this system is accurate, reliable and cost-free. The income of this system is penalty fee collection when the book is not returned within the due time.

REFERENCES

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Schedule

Date	Task
25-05-23	Literature Review
26-05-23	Phase 1 Presentation
25-06-23	Collection of dataset and Code implementation
TBD	Phase 2 presentation
Post phase 2 presentations	Inference and conclusion
TBD	Phase 3 presentation

THANK YOU

