MES COLLEGE OF ENGINEERING, KUTTIPPURAM DEPARTMENT OF COMPUTER APPLICATIONS 20MCA245

– MINI PROJECT

PRO FORMA FOR THE APPROVAL OF THE THIRD SEMESTER MINI PROJECT

*(Note: All entries of the pro forma for approval should be filled up with appropriate and complete information. Incomplete Pro forma of approval in any respect will be rejected.)*

Mini Project proposal No: 1 (Filled by the Department)

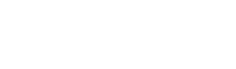
Academic Year:2020-2021 Year of Admission:2020

1. Title of the Project : LIBRARY INTELLIGENT BOOK RECOMMENDATION SYSTEM USING FACIAL EXPRESSION RECOGNITION
2. Name of the Guide : Dr. Geevar C Zacharias 3.Number of the Student: 1

4.Student Details (in BLOCK LETTERS)



Name



DEVIKA P S



Roll Number 16



Signature

Date:1/12/2021







**A pproval Status :** Approved / Not Approved

Signature of Committee Members

**Comments of The Mini Project Guide** Dated Signature

Initial Submission :



First Review :

Second Review :

**C omments of The Project Coordinator** Dated Signature

Initial Submission:

First Review

Second Review Final Comments :

Dated Signature of HOD:

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LIBRARY INTELLIGENT BOOK RECOMMENDATION SYSTEM

DEVIKA PS

## INTRODUCTION AND OBJECTIVES

This system recommends books based on user preferences. A book recommendation system recommends books to a user by taking similarity of books. This recommender system recommends books based on the abstract description or features. It identifies the similarity between the books based on their description and rating. High rated books and compared to other books contents. If a book content is more similar to the compared one. So the system recommends books based on content matching and rating preferences. The system analyses the books that were liked by the user with the books he had not rated and looks for similarity. Out of these unrated books, the books with the maximum value of similarity index will be recommended to the user. It also considers the user's previous history in order to recommend a similar books. Finally, recommendations are made based on the type of book the user likes. A content-based recommendation system recommends items to a user by taking similarity of items. This recommender system recommends products or items based on the description or features. It identifies the similarity between the products based on their description. It also considers the user's previous history in order to recommend a similar product.

There are three main traditional book recommendation methods: Content Based Recommendation, knowledge Based Recommendation and Collaboration Filtering Recommendation. Content based recommendation makes the recommendation results tend to focus on a specific field, resulting in a high proportion of specific categories of items, ignoring the effective results of other categories. Due to the scarcity of scoring data, collaborative filtering algorithm has the problem of cold start. In order to increase the personalized function of the book recommendation system, we propose to obtain users' preferences through facial expression recognition to recommend books to users. On the one hand, the analyzed data is real-time and authentic; on the other hand, the recommended method has the characteristics of human-machine interaction and can provide timely information feedback.

## HARDWARE AND SOFTWARE REQUIREMENTS

This specifies the Hardware and support Software required to carry out the development

## HARDWARE REQUIREMENTS

* Processor : Intel Pentium Core i3 and above
* Primary Memory : 4GB RAM and above
* Storage : 320 GB hard disk and above
* Display : VGA Color Monitor
* Key Board : Windows compatible
* Mouse : Windows compatible

## SOFTWARE REQUIREMENTS

One of the most difficult task is selecting software for the system, once the system requirements is found out then we have to determine whether a particular software package fits for those system requirements. The application requirement:

* Front end : Html, CSS, Javascript
* Back end : MySQL
* Operating system : windows 7 or above
* Technology Used : Python
* IDE : Pycharm,Android Studio
* Frame Work Used : Flask

## PROBLEM DEFINITION AND INITIAL REQUIREMENTS

**Existing System:**

Facing the massive collection resources of library, many readers have no purpose and low efficiency when they borrow books. Traditional book recommendation methods mainly include book grading and book content recommendation. These methods have some problems, such as low recommendation effect, too centralized recommendation content and so on. With the in-depth study of recommendation system by many scholars, a variety of personalized book recommendation systems have been proposed. Through the analysis of big data, the method of recommendation based on users' borrowing records, browsing time, the number of clicks, etc. is adopted. These data are statistical information based on the historical records of user accounts, with inaccuracy and limitation. The same user account can be used by more than one person, so the book borrowing record has no pertinence to the user account. At the same time, new registered users have no record of borrowing books, and the book recommendation system will cause cold start problems.

# Proposed System:

The System **Library Intelligent Book Recommendation System Using Facial Expression Recognition** solve the above problems, this paper proposes that the library book recommendation system. The recommendation system recommends books based on user preferences. A book recommendation system recommends books to a user by taking similarity of books. This recommender system recommends books based on the abstract description or features. It identifies the similarity between the books based on their description and rating. High rated books and compared to other books contents. If a book content is more similar to the compared one. So the system recommends books based on content matching and rating preferences. It also considers the user's previous history in order to recommend a similar books. Finally, recommendations are made based on the type of book the user likes. Finally, recommendations are made based on the type of book the user likes.

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## BASIC FUNCTIONALITIES OF PROJEC

There are four types of modules. Administrator, Librarian, User. Each of them have distinct login section each of them can login their account section by conforming their unique username and password.

# Librarian

Librarian can login the app using his/her unique username and password. They can view rules and notification. The Librarian has the ability to add books and also he/she can view and manage the book .list. They can add the summary list of each book uploaded

* Add and manage books
* Approve users
* View book reservations
* Issue book
* Return book

# User

User must register before login. User can login the app using his/her unique username and password. User can view books and buy it.

* Registration
* View Books
* Reserve a book
* Return book
* Give rating
* Recommendation

**Shops**

* Login
* Registration
* Add & Manage Books
* View & Accept booking
* View monthly report

## Book Recommendation

## A book recommendation system is a type of recommendation system where we have to recommend similar books to the reader based on his interest. The purpose of a book recommendation system is to predict user’s interest and recommend books to them accordingly. A book recommendation system can take into account many parameters like book content and book quality by filtering user reviews. A recommendation system seeks to predict the rating or preference a user would give to an item given his old item ratings or preferences. Once the similarities have been computed for all the books, they are sorted and the books most similar to the books rated by the user are recommended to him. Recommendations to the user can also be based on a particular book chosen by the user. In this case, the similarity calculation will be done only for this book and the most similar books will be recommended to him. Books in the entire dataset can be searched by author or by title, and the user can give ratings to these books for more accurate results.