DEPARTMENT OF COMPUTER APPLICATION

Final Year Project

PROGRESS DIARY

(KCA-353)

Book Recommendation System

Kartikay Srivastava	2301640140096
Shivam Nishad	2301640140169
Yash Chaurasia	2301640140213

Project_Id: - G49

Mr. Rahul Bajpai
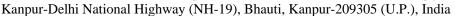## (Assistant Professor, MCA)

Department Vision Statement

To be recognized as a department of distinction in the field of computer application in order to produce competitive, employable and ethical professionals who can fulfill societal obligations and professional requirements of the ever changing IT industry, and to evolve as a center for excellence.

Department Mission Statements

1. To provide advanced theoretical, experimental and applied computer science knowledge to the students.

2. To provide training on cutting edge technologies to the students of MCA department as well as facilitating collaboration with our academic partners.

3. To prepare students for professional careers and promote advance studies and research in computer science.

4. To emphasize extra-curricular activities and personality development, leading to comprehensive development of the students.

Program Educational Objectives (PEOs)

1. The students will be efficient Software Professionals with the knowledge of Computer Application discipline, this will enable them to opt for further studies or pursue careers in different domains of the IT industry.

2. The students will be able to design innovative solutions to real-life problems that are technically and socially acceptable.

3. The students will act ethically and responsibly as team leaders, communicators, facilitators, and part of a multidisciplinary team.

4. The students will be able to self-upgrade their skills on new technologies/tools with an attitude toward lifelong learning.
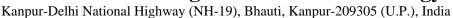
Department Program Outcomes (POs)

The students of Department of computer application will be able:

1. Computational Knowledge: Apply knowledge of computing fundamentals, computing specialization, mathematics, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements

2. Problem Analysis: Identify, formulate, research literature, and solve complex computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.

3. Design / Development of Solutions: Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

4. Conduct Investigations of Complex Computing Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern Tool Usage: Create, select, adapt, and apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.

6. Professional Ethics: Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practices.

7. Life-long Learning: Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional.

8. Project Management and Finance: Demonstrate knowledge and understanding of the computing and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

9. Communication Efficacy: Communicate effectively with the computing community, and with society at large, about complex computing activities by being able to comprehend and

write effective reports, design documentation, make effective presentations, and give and understand clear instructions.

10. Societal & Environmental Concern: Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practices

11. Individual & Team Work: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments.

12. Innovation and Entrepreneurship: Identify a timely opportunity and use innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large.

Department Program Specific Outcomes (PSOs)

The students will be able to:

1. Use algorithms, software design, and concepts of programming languages to find solutions for application development.

2. Understand the processes that support the delivery and management information systems with the help of advanced software tools and techniques.

Course Outcomes:

On successful completion of this course:

S No	Course Outcome
CO1	**Use [L1: Remember] fundamental knowledge and skills to select a real world problem.**
CO2	**Apply [L3: Apply] creative thinking in the design of mini project**
CO3	**Demonstrate and infer [L4: Analysis] the solution.**
CO4	**Present [L2: Understand] their proposed solution.**

CO-PO/PSO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	-	-	-	-	-	3	-	-	3	-	3	3	-
CO 2	-	3	3	-	3	-	3	-	-	-	-	3	3	-
CO 3	-	-	3	-	3	2	3	3	-	-	2	3	3	-
CO 4	-	-	-	-	3	3	3	3	3	-	3	3	-	3
Avg	3	3	3	-	3	2.5	3	3	3	3	2.5	3	3	3

Book Recommendation System

A

Report submitted in partial fulfillment of the requirement for the

degree of

MCA
In

Department of computer application

Under the Supervision of

Mr. Rahul Bajpai (Assistant Professor, MCA)

By

Pranveer Singh Institute of Technology,Kanpur
Dr A P J A K Technical University
Lucknow

DECLARATION

This is to certify that Report entitled "Book Recommendation System" which is submitted by us in partial fulfillment of the requirement for the award of degree Master of Computer Application to Pranveer Singh Institute of Technology, Kanpur Dr. A P J A K Technical University, Lucknow comprises only our own work and due acknowledgement has been made in the text to all other material used.

Date: -

Group Member Name and roll no.

Kartikay Srivastava	2301640140096
Shivam Nishad	2301640140169
Yash Chaurasia	2301640140213

Approved By:

Head of Department

Certificate

This is to certify that Report entitled "Book Recommendation System" which is submitted by **Kartikay Srivastava -2301640140096, Shivam Nishad -2301640140169 and Yash Chaurasia -2301640140213** in partial fulfillment of the requirement for the award of degree Master of Computer Application to Pranveer Singh Institute of Technology, Kanpur Dr. A P J A K Technical University, Lucknow is a record of the candidates own work carried out by them under my supervision. The matter embodied in this thesis is original and has not been submitted for the award of any other degree.

Date:

Signature
Mr. Rahul Bajpai
(Assistant Professor, MCA)

Abstract

In the era of digital information, personalized recommendations have become a crucial component of user experience in various domains, including online literature. This project focuses on building a Book Recommendation System using machine learning techniques to enhance the user experience by suggesting books based on individual preferences. Leveraging collaborative filtering, content-based filtering, and hybrid recommendation algorithms, the system aims to provide tailored book recommendations to users based on their reading history, preferences, and ratings..

This system has been tested and validated on real-world data, showing significant improvements in recommendation precision and user satisfaction. By applying machine learning algorithms, the Book Recommendation System demonstrates an efficient, scalable solution that could be implemented on popular book platforms, enhancing user engagement and promoting literature discovery.

Hardware & Software Requirements

- **Hardware:** Quad-core or higher, Minimum 8GB, 256GB SSD or higher for better performance, Linux (Ubuntu or Debian), macOS, GPU or Windows
- **Software:** Visual Studio Code**,** Jupyter Notebook, scikit-learn , Cloud Services (optional), Pandas and NumPy

Tools & Technologies

- **Frontend:** Flask, HTML5/CSS3
- **Backend:** Python
- **Database:** MySQL
- **API:** REST API libraries (e.g., Flask-RESTful, FastAPI)

Unique Selling Propositions (USP)

Our Book Recommendation System revolutionizes the reading experience by delivering highly accurate, personalized book suggestions that go beyond traditional recommendation methods. Unlike generic systems, our platform combines collaborative filtering with content-based and hybrid machine learning algorithms to understand each reader's unique tastes and preferences, offering suggestions that are not only relevant but also unexpected and delightful. Whether a user is a seasoned reader or exploring new genres, our system ensures continuous engagement by recommending books tailored to their reading history, similar user profiles, and content attributes. With this advanced machine learning approach, readers can easily discover new books, authors, and genres, creating a truly personalized and enriching journey through the world of literature.

Synopsis

(Attach the signed copy of synopsis here).

(This page should not be printed)

Printing Guidelines
1) Heading Font Size: 14
2) Content Font Size: 12
3) Font Name: Times New Roman
4) Line Spacing: 1.5"
5) Alignment: Justified (Left & Right both)

PSIT-Pranveer Singh Institute of Technology

Kanpur-Delhi National Highway (NH-19), Bhauti, Kanpur-209305 (U.P.), India

FYP-Time Line

FYP SCHEDULE ODD SEM 2024-2025

ACTIVITY	DEADLINE	PERSON INCHARGE	DOCUMENT/FORM
Title/Group Formation/ Supervisor Allocation	Till last week September-2024	Supervisor/Group leader	Project Proposal
Proposal Submission	Last week of September-2024	Supervisor/DPC	PowerPoint Presentation
Progress Evaluation 1	3rd week of OCT-2024	DPC/ Evaluators	PowerPoint Presentation
Weekly performance Monitoring	Throughout the semester	Supervisor	FYP Diary/Presentation
Progress Evaluation 2	1st Week of November -2024	DPC/ Evaluators	PowerPoint Presentation
End Semester Report (FYP Submission)	4th week of November-2024	Supervisor	FYP Report
Progress Evaluation 3	2nd week of December – 2024	DPC/Evaluators	PowerPoint Presentation

Scheme Semester-III

Course code	Course Name	Teaching Scheme			Credit Assigned			
		Theory	Practical	Tutorial	Theory	Practical	Tutorial	Total
KCA 353	Mini Project	0	4	0	0	2	0	2

(To be filled by Students for every week to show the Weekly Progress of Project)

Subject Code: KCA 353   **Group Id:G49**

Meeting Date

Session 2024– 2025 (Odd Semester)

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Project Title : Book Recommendation System

Name of Project Supervisor: Mr. Rahul Bajpai

Work done in current Week:

Work to be done in next Week   :

Supervisor Comments:

Supervisor Signature/Date…………………………………………

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ProjectTitle: Book Recommendation System

Project_Id.: G49

Roll No	Name of the student	Total Marks
2301640140096	Kartikay Srivastava	
2301640140169	Shivam Nishad	
2301640140213	Yash Chaurasia	

Type of the project (Software/ Software and Hardware/ Simulation or Modelling):

Any other Remark:

Supervisor Name and Signature: