**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** |
| **CO1** | 3 | - | - | - | - | - | 3 | - | - | 3 | - | 3 | 3 | - |
| **CO2** | - | 3 | 3 | - | 3 | - | 3 | - | - | - | - | 3 | 3 | - |
| **CO3** | - | - | 3 | - | 3 | 2 | 3 | 3 | - | - | 2 | 3 | 3 | - |
| **CO4** | - | - | - | - | 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

Kartikay Srivastava 2301640140096

Shivam Nishad 2301640140169

Yash Chaurasia 2301640140213



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.

|  |
| --- |
| **Group Member Name and roll no.**  Kartikay Srivastava 2301640140096  Shivam Nishad 2301640140169  Yash Chaurasia 2301640140213 |
|  |

**Date: -**

#### 

## 

## 

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## 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.

***FYP-Time Line***

**FYP SCHEDULE ODD SEM 2024-2025**

|  |  |  |  |
| --- | --- | --- | --- |
| **ACTIVITY** | **DEADLINE** | **PERSON INCHARGE** | **DOCUMENT/FORM** |
| Title/Group Formation/  Supervisor Allocation | Till laststweek September-2024 | Supervisor/Group leader | Project Proposal |
| Proposal Submission | Last week of September-2024 | Supervisor/DPC | PowerPoint Presentation |
| Progress Evaluation 1 | 3rd ndweek of OCT-2024 | DPC/ Evaluators | PowerPoint Presentation |
| Weekly performance Monitoring | Throughout the semester | Supervisor | FYP Diary/Presentation |
| Progress Evaluation 2 | 1st nd 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 nd week of December – 2024 | DPC/Evaluators | PowerPoint Presentation |

**Scheme Semester-III**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course code | Course Name | **Teaching Scheme** | | | **Credit Assigned** | | | |
| **KCA 353** | **Mini Project** | **Theory** | **Practical** | **Tutorial** | **Theory** | **Practical** | **Tutorial** | **Total** |
| **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*…………………………………………**

Project Coordinator Comment and Signature:

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**Name of Project Supervisor: Mr. Rahul Bajpai**

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**Work to be done in next Week:**

**Supervisor Comments:**

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

Project Coordinator Comment and Signature:

**(To be filled by Project Supervisor)**

**ProjectTitle: Book Recommendation System**

**Project\_Id.: G49**

|  |  |  |
| --- | --- | --- |
| **Roll No** | **Name of the student** | **Total Marks** |
| 2301640140096 | Kartikay Srivastava |  |
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|  |  |  |
|  |  |  |

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

**Any other Remark:**

**Supervisor Name and Signature:**