Book Recommendation System

Group member Name and roll no.

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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:** MongoDB
- **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.