

Term Project Proposal

PYTHON PROGRAMMING IN CANADA

INSTRUCTOR: Simrandeep Kaur

CLASS: AML 1214\_3

**Book Recommendation System using Collaborative-Filtering**

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**PROJECT PROPOSAL**

1. **Name of Project**

Book Recommendation System Using Collaborative-Filtering.

1. **Feasibility & Requirements**

Recommender systems are active information filtering systems which personalize the information coming to a user based on his interests, relevance of the information etc. Recommender systems are used widely for recommending movies, articles, restaurants, places to visit, items to buy etc. This system is designed to help users find similar books based on their interest. Collaborative based filtering recommender systems are based on past interactions of users and target items. The goal is to design a book recommendation system using collaborative filtering which recommends users appropriate books according to their book rating records.

1. **Requirements:**

*Minimum Hardware Requirement*

* + Intel i3 4th Gen or Equivalent
  + 4GB RAM
  + Windows 10

*Minimum Software Requirement*

* + Python 3.9.7
  + Jupyter Notebook
  + Libraries and framework- NumPy, Pandas, Matplotlib, Seaborn, Sklearn, Scipy, Stream-lit, Flask
  + HTML, CSS, JavaScript (for frontend)

1. **Modules-** There are 5 modules:

* Data Preparation and Preprocessing module
* Data Visualization module
* Recommender Engine
* Application Interface
* Front end for the application

1. **Team Member Responsibilities**

* Data Acquisition and Preparation – Noel Joe Kulangara
* Preprocessing and Data Visualization - Sarwan Megh
* Recommender Engine- Noel Joe Kulangara and Pulkit Kapoor
* Aggregating modules and Application Interface – Sarwan Megh
* Front end for the application – Pulkit Kapoor

1. **References**

* Midouazerty. (2021, April 3). Book recommendation system with machine learning. Kaggle. Retrieved November 11, 2021, from <https://www.kaggle.com/midouazerty/book-recommendation-system-with-machine-learning/notebook>.
* Real Python. (2021, June 5). Build a recommendation engine with collaborative filtering.

Real Python. Retrieved November 11, 2021, from <https://realpython.com/build-recommendation-engine-collaborative-filtering/>.