Introduction to Machine Learning - CSE574

Recommendation Systems

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Introduction

Recommendation systems attempt to predict the preference or rating that a user would give to an item. Knowledge discovery techniques can be applied to the problem of making personalized recommendations about items or information during a user's visit to a website. Collaborative Filtering algorithms give recommendations to a user based on the ratings of other users in the system.

- User user filtering
- Item item filtering

Libraries used:

We developed this recommendation in python and made use of different libraries available in python.

- pandas
- numpy
- matplotlib
- seaborn
- sklearn
- tkinter

Procedure

We started with doing the exploratory data analysis to understand the data.

Cleaned the data by removing null/missing values from the data.

Prepared a dataset for building a pivot matrix and calculating the cosine similarity.

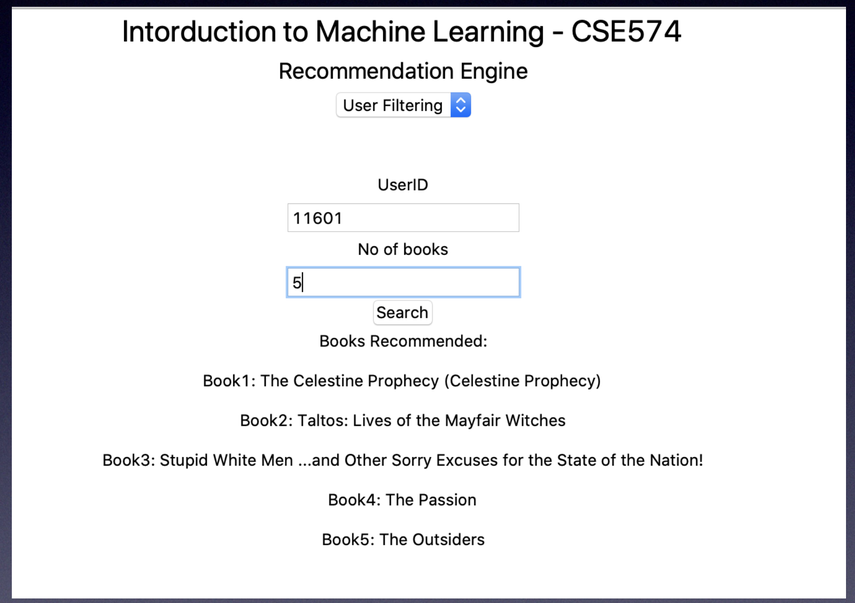
Based on the cosine similarity, we recommended the products to other users.

Created a GUI using tkinter library.

Results:

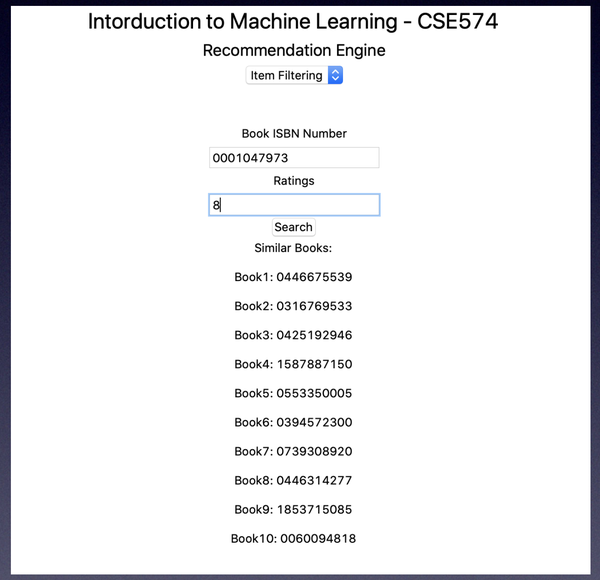
Main screen asking user to select the type of filtering.

User user filtering



After selecting user filtering, it asks user to enter user id and number of books to enter.

Item item filtering



After selecting item filtering, it asks user to enter book number and rating.

Thank You