

Chatbot with Recommender system

Problem formulation:

Nowadays, there are many books in many different fields, making it difficult to locate a decent book that is appropriate for the consumer. so we use a chatbot to recommend a book based on the interest of the user and other features of the chatbot can get it like age or Location, the recommendation system will build with collaborative filtering.

Methodology:

Collaborative filtering will be used to recommend books for a user based on the ratings of other users. We will use a python library for recommender systems that are called Surprise. DialoGPT model will be used as our chatbot.

Data Description and Data Sources:

the dataset is the mode for the recommended system and it Contains 278,858 users providing 1,149,780 ratings about 271,379 books, and it contains 3 files the first contains information about the user like age and location and id and the second file contains information about books like Year-Of-Publication, Publisher, and others and third is contains data about rating user id and book id and rating with expressed on a scale from 1-10

Evaluation Metrics for Recommender Systems:

The recommendation systems are evaluated by many metrics like accuracy, personalization, and coverage for our collaborative filtering.

Accuracy measure the percentage of correct recommendations in comparison with the total recommendations, in the other hand, coverage refers to the objects that the systems can provide a recommendation for, finally personalization refers to the ability to recommend the same item to different users.

Results Expectations:

Recommend the best suitable book for the user based on the user inputs and overall user interest.