MODEL
DEPLOYMENT
ASSIGNMENTS

Topic:

Deployment of a Movie
Recommendation Engine

Objective:

The objective of this assignment is to deploy a recommendation engine for the IMDB Top 1000 Movies dataset. You will create a web application that takes user preferences or movie inputs and provides personalized movie recommendations based on collaborative filtering techniques.

Tasks:

Recommendation Engine Development:

- Choose a collaborative filtering algorithm suitable for movie recommendations, such as user-based or item-based collaborative filtering, matrix factorization, or hybrid approaches.
- Split the dataset into training and testing sets.
- Train the recommendation engine using the training set.
- Evaluate the recommendation engine's performance using appropriate evaluation metrics, such as precision, recall, or mean average precision.

Web Application Development:

- Choose a web development framework or library, such as Flask, Django, or FastAPI, for building the web application.
- Create a user interface that allows users to input their preferences or movie choices so that they can get the Top 10 Recommendations based on that Movie.

Tasks:
- Implement the necessary code to load the trained recommendation engine from Step 2 and use it to provide personalized movie recommendations.
- Test the web application locally to ensure it is functioning correctly.

Deployment:
- Select a cloud platform (e.g., AWS, Google Cloud, Azure) or a suitable hosting service for deploying your web application.
- Deploy your web application on the chosen platform.
- Verify that the deployed web application is accessible and can provide movie recommendations based on user preferences or inputs.

Documentation and Presentation:
- Create a document or a presentation summarizing the steps taken to deploy the recommendation engine for the IMDB Top 1000 Movies dataset.
- Include the code snippets, explanations, and screenshots demonstrating the functionality of the deployed web application.
- Discuss any challenges faced during the deployment process and how you addressed them.
- Reflect on the importance of recommendation engines and their potential real-world applications.

Dataset:
The Dataset is about the IMDB Ratings and Other basic details about the Top 1000 Movies in the IMDB Database.

Dataset Link:
https://docs.google.com/spreadsheets/d/1CQFgYbUlQ0eJFCON8dwrQNrkpXIlRsBgm-CWeR5nPSQ/edit#gid=0

Submission:
- Submit your code files and any additional resources used for deployment.
- Include the documentation or presentation summarizing the deployment process and the web service's functionality.
- Provide any necessary instructions for running or testing your code.