VIDEO RECOMMENDATION SYSTEM

COHORT 8 - TEAM SANKARA

Introduction

Video Recommendation System is a technology that uses algorithms and data analysis to suggest videos to users based on their preferences, behavior and past interactions. These systems are commonly used on video streaming platforms, social media and other online content providers.
Video Recommendation System aims to provide a personalized and engaging user experience by offering contents that alligns with the user's interests, ultimately enhancing user engagement, content discovery and user satisfaction. It creates an era where the vast selection of online videos is curated just for you, where your every click and view is harnessed to guide you to content you'll love.

Problem Description

The explosive growth of online video content has created a dilemma for users seeking relevant and engaging material. While a vast array of videos is accessible, users often struggle to discover content that alligns with their preferences and interests. Therefore, it is imperative to create and improve video recommendation systems that can successfully handle the problem of content discovery and personalisation.

Proposed Method

1. **Data sourcing:** data such as name, rating, genre, etc. would be obtained from already existing datasets such as; MovieLens datasets, IMDB datasets . Other features such as the movie covers and summaries can be scrapped for APIs such as IMDB, themoviedb etc.
2. **Data cleaning and preparation:** libraries such as pandas, matplotlib and scikit-learn would be used for this purpose.
3. **ML Modelling:** Collaborative filtering approach involving the use of the two tower model would be employed. TensorFlow library would also be used in this process for training our model, fine tuning model by adjusting hyperparameters. There are two stages; Retrieval stage and ranking stage. We would be focusing on the retrieval stage with the ranking stage as a possible improvement.
4. **Model Deployment:** A web application would be developed for this purpose using tools such as streamlit, gradio, etc.

Proposed Split

1. Data sourcing - Entire team
2. Data cleaning and preparation - Ifeoluwa
3. ML Modelling - Ehimwenman
4. Model Deployment - Charles

Proposed Timeline

1. Data collection: 1-3 days
2. Data cleaning and preparation: 3-5 days
3. ML Modelling and Model Deployment: 1 month

Conclusion

This project would benefit users and businesses like streaming services as it can solve or reduce to a significant degree the problem of choice overload (walking away because of too many choices). An upgraded version can be potentially applied in e-commerce for product recommendation.

Team Sankara

1. Ogobe Charles - Member
2. Olugbade Ifeoluwa - Member
3. Ehimwenman Edemakhiota - Member
4. Onyeali David - Team mentor

References

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2. https://www.tensorflow.org/recommenders/examples/basic_retrieval
3. https://medium.com/@pauloyc/tensorflow-recommenders-for-powerful-recommendation-system-e3dec138a07f