

Video Recommendation System for a Communication and Personal Development Application

- A Case Study

About Application

- An AI-powered communication and personal development coach for mobile devices.
- The mobile application has a repository of thousands of videos from internationally recognized coaches. The videos are shown as per the goals and interests set by the users

Objective

- To recommend relevant and engaging videos to users based on their interests and goals.

Challenges

- Multiple data sources and insufficient data resulted in a cold start problem.
- The system was designed in such a way that it uses only metadata and some rules for the recommendation engine. This was a limiting factor as we cannot capture the whole essence of the information.
- Feature extraction was difficult due to the large size of the videos.

Solution

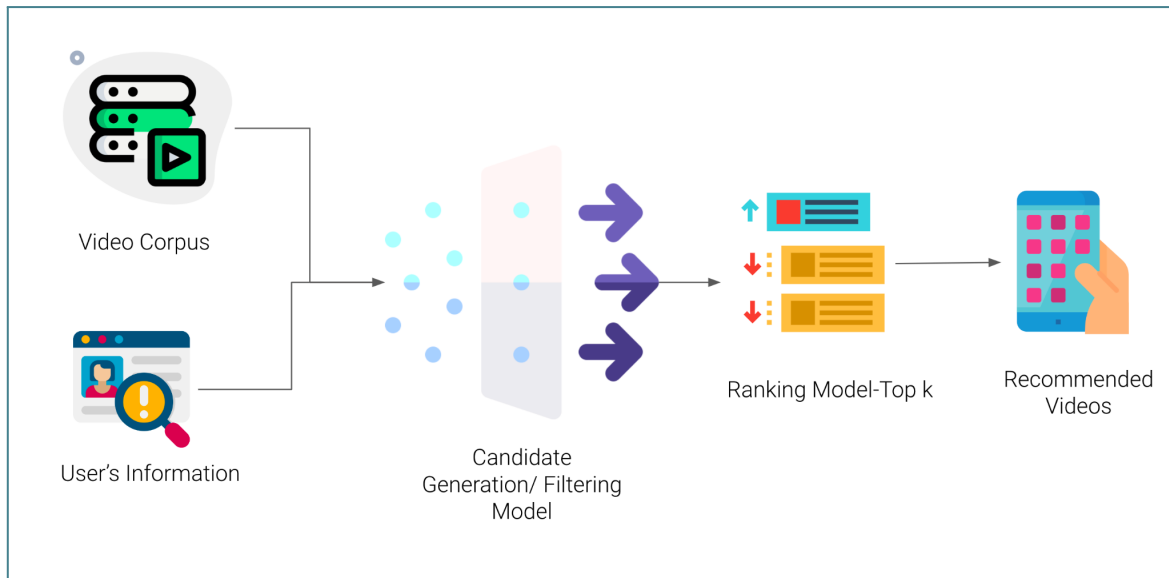


Fig 1.0 Flow Diagram of Recommendation system

- We applied a hybrid multi-model base system for recommending videos by analyzing the metadata of videos, users, and the content type or categories.
- We created a system that required the users to mention the skills they want to enhance (personal, interview, managerial, or leadership skills). These data points were used to build the recommendation system. Moreover, we created a repository of videos that are most watched by users based on the information gathered such as geographical location, demographic, etc.
- The system included a neural network-based filtering algorithm that utilizes users' metadata and app usage history. This enabled the app to recommend videos to users based on the preferences of other users with similar interests and activities.
- For new videos uploaded into the system, we collected information based on the most active users who watched almost all the videos. The new videos were then recommended to these active users to gauge whether the video would be accepted by other users or would they lose interest. Based on the video content and quality information gathered, the videos were recommended to other users.