Project-3: Mobile Streaming Application

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1 Context:

This project was developed as part of the INF3256 Teaching Unit in the Computer Science - Data Science Option program at the University of Yaoundé 1. We utilized HTML5, CSS3, JavaScript, React, PHP, and Felgo for this project. The project was a collaborative effort involving a team of three participants:

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2 Objective:

The objective is to integrate recommendation systems into our web and mobile application.

3 State of the Art:

We focused on playlist-based architectures like Spotify, which is one of the most studied existing models. We analyzed the features and advantages of this architecture to incorporate them into our solution.

4 Data Collection:

We got 3600 songs from the internet by finding links on YouTube (web scraping). We used a Python tool to download and store these songs on the internet for easy access (like Google Drive). For the mobile app, we downloaded and kept the songs directly on the device.

5 Methodology:

In the case of our song streaming application, we concentrated on recommending songs and playlists to logged-in users based on their interactions with the application. We designed an effective recommendation system based on the K-Nearest Neighbors (KNN) algorithm and matrix factorization, taking into account similarities between playlists and individual songs.

6 Functionalities:

Our song streaming app has several cool features for you to enjoy. You can sign up, search for songs, get personalized playlists, and listen to songs in real-time. It's all designed to be easy and fun to use

7 My Contribution:

This project was a team effort, and I was responsible for the entire mobile part of the application using Felgo, although it did not have an integrated recommendation system like the web version. Additionally, I built a KNN model for our song recommendation system in PHP.

8 Copyright and Data Sources:

We want to clarify that we do not hold any copyright on the covers and songs used in our application. All songs and cover images used in this project are subject to their respective copyrights and are used for educational and demonstration purposes only.
Our applications do not use the same databases; therefore, the interfaces may differ.
Those applications are currently not deployed and functions locally.