

CS 411 Team 7 Proposal

Idea: That's a Wrap - Your Music Recap

Overview

A platform that provides users with a monthly recap of their top 10 songs, artists, and genres, acting like a frequent "Spotify Wrapped." It could offer insights into their listening habits and allow them to explore their musical journey over shorter periods. This concept marries a user's love for music with analytical insights into their own habits, making it both engaging and personally relevant. It's a blend of entertainment and self-reflection that can cater to a wide user base. Ensure to navigate through the Spotify API documentation and guidelines to ensure compliance and feasibility in data retrieval and usage.

Components

1. Database Use:
 - User Profiles: Store user login data and their monthly top songs, artists, and genres.
 - Music Data: If possible, store meta-data of tracks like artist, genre, and other relevant details.
2. APIs:
 - Spotify API: Retrieve user's listening data to determine top songs, artists, and genres.
 - Apple Music API: Retrieve user's listening data to determine top songs, artists, and genres.
3. Third-party Authentication:
 - Users can log in using their Spotify account using OAuth, ensuring a seamless integration of their listening data.
4. Decoupled Architecture:
 - Frontend: Displaying user data in a visually engaging manner, perhaps using charts or interactive graphics to explore monthly listening trends.
 - Backend: Handling data retrieval from Spotify, processing to determine top tracks/artists/genres, and managing user profiles and historical data.

Additional Features

- **Insights & Analytics:** Offer interesting analytics like total listening time, genre diversification, new artists discovered, and compare data with previous months.
- **Shared Experience:** Users can share their monthly top tracks on social media or directly with friends who use the platform, encouraging social interaction and platform growth.
- **Playlist Creation:** Enable users to instantly create playlists based on their top tracks, or suggest new songs based on their monthly listening habits.
- **Memory Lane:** Allow users to look back at their top tracks from previous months/years, offering a nostalgic trip through their musical history.

Benefits

- **Discover Patterns:** Users might discover interesting patterns or shifts in their listening habits.
- **New Music Exploration:** By reflecting on their listening habits, users might be encouraged to explore new artists or genres.
- **Social Interaction:** Sharing and discussing musical interests with friends enhances social bonds and common interests.

Team Members

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Sources

- [Top 8 Best Free Music APIs \(for Developers in 2021\) \[38+ Reviewed\]](#)

Plan

1. Project Planning
 - a. Set goals
 - b. Core features: Connecting Spotify/Itunes and enabling social interactions
 2. Tools selection
 - a. Programming language
 - b. Framework
 - c. Database technology for user data storage (MySQL)
 - d. Set up version control (Git)
 3. User Account Management
 - a. Implement user authentication and registration using a library or framework
 - i. OAuth for Spotify
 - b. Store user account information in your database
 - i. Security?
 4. API Integration
 - a. Integrate Spotify and Itunes API to access user music data
 - b. Retrieve and store user top 10 monthly songs from the platforms
 - c. Handle authentication and authorization for API access
 5. User Profile and Dashboard
 - a. Design user profiles where users can view their generated playlists and connected music services
 - b. Create a dashboard for managing playlists and account settings
 6. Social Features
 - a. Implement the ability for users to add friends
 - b. Develop a friend request system
 - c. Allow user to share their top 10 songs
 7. UI and UX
 - a. Design a user-friendly and visually appealing website layout
 - b. Responsive design
- Monthly covers