

LiveBeat: Experience Your Music Live

Overview:

LiveBeat is a sophisticated web application designed to seamlessly integrate users' digital music streaming activities with the excitement of live performances. By analyzing your monthly Spotify listening habits, LiveBeat connects you with upcoming concerts and live events featuring your favorite artists, localized to your region or selected destinations, all powered by Ticketmaster.

Core Features:

1. Database and Caching:

Structured Data Management: Utilizes a streamlined database architecture hosted on Firebase to securely store user preferences, top tracks, and event interests.

Efficient Query Handling: Implements caching strategies to optimize data retrieval and reduce API requests' frequency.

2. API Integration:

Spotify API: Fetches a user's most played tracks over a specified timeframe to personalize the experience.

Ticketmaster API: Identifies relevant upcoming events featuring artists from the user's preferred list.

3. Authentication System:

Secure OAuth Implementation: Leverages existing OAuth protocols for user authentication via Spotify, enhancing security while reducing the necessity for bespoke security solutions.

4. Frontend and Backend Architecture:

Frontend Design: Features a clean and stylish interface using HTML, CSS, and JavaScript, augmented with Bootstrap for a responsive layout.

Backend Operations: Employs Node.js with Express for robust server management, API interactions, and user session control.

Detailed Functionalities:

Monthly Music Snapshots: Utilizes the Spotify API to generate a visually compelling summary of a user's monthly music preferences, highlighting top songs and artists.

Concert Discovery: Provides a personalized listing of forthcoming concerts, enabling users to filter by location and date. Detailed event information such as dates, venues, ticket availability, and pricing are readily accessible.

Bookmark Events: Users can directly mark and store events of interest in their profile for future reference.

Minimalistic Design Approach: Prioritizes a user-friendly interface and smooth navigation, focusing on essential functionalities to enhance user engagement without overwhelming them.

Interactive Event Calendar: Features an interactive calendar where users can save and manage dates for concerts of preferred artists, including customizable reminders to enhance their planning experience.