

CS 411 Team 5:

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Web Application Concept: LiveBeat - Your Music, Live

Overview:

LiveBeat offers users a personalized monthly recap of their most listened-to songs on Spotify and matches them with upcoming concerts and live events for those artists in their area or in specified locations, powered by Ticketmaster.

Key Features:

1. **Monthly Music Recap:**
 - Utilize the Spotify API to analyze users' listening habits over the past month, identifying top songs and artists.
 - Present users with a visually engaging summary of their monthly music listening statistics.
2. **Live Event Recommendations:**
 - For each top artist, use the Ticketmaster API to search for upcoming concerts and live events near the user.
 - Provide detailed event information, including dates, venues, ticket availability, and pricing.
3. **Personalized Notifications:**
 - Allow users to opt-in for notifications when artists from their monthly top list announce new concerts or when tickets go on sale.
4. **Interactive Event Calendar:**
 - Offer an interactive calendar feature where users can save dates for their favorite artists' concerts and receive reminders.

Implementation Details:

Spotify API Integration:

- **Purpose:** Retrieve user's top tracks and artists.
- **Data Handling:** Process this data to identify which artists the user listens to most frequently.

Ticketmaster API Integration:

- **Purpose:** Find live events and concerts for the artists identified via the Spotify API.
- **Location-Based Searches:** Enable users to specify their location or search preferences for finding events both locally and in other cities they may be interested in visiting.

User Authentication and Profiles:

- Secure OAuth authentication for Spotify to access users' music listening data.
- Option for users to create profiles on LiveBeat for saving their event preferences and managing notifications.

User Interface:

- A clean, user-friendly interface that displays monthly music recaps and upcoming events in an easily navigable format.
- Visualization tools for displaying listening trends and matching them with live event opportunities.

Additional Considerations:

- **Privacy and Data Security:** Ensure user data is securely handled, with clear policies on data use and user privacy.
- **Mobile Responsiveness:** Design the web application to be fully responsive, ensuring a great user experience on both desktop and mobile devices.
- **Cross-Platform Sharing:** Allow users to share their music recaps and event plans on social media platforms to encourage interaction and engagement.

Challenges and Solutions:

- **API Limitations and Costs:** Monitor the rate limits and potential costs associated with using the Spotify and Ticketmaster APIs, and optimize API calls for efficiency.
- **Geographical Availability:** Ensure that the application can accurately match users with events in their region or any specified location, which may require additional logic to handle geographical data and user preferences.

This concept leverages the strong points of both Spotify's detailed listening data and Ticketmaster's comprehensive event listings to create a unique, engaging product that music fans would love. It bridges the gap between enjoying music digitally and experiencing it live, adding value to the user's musical journey.