

Team Number: 206-4

Team Name: Linus's Little Darlings

Our Names:

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Application Name: *Amplify*

Application Description:

We will be utilizing Spotify API to create a web-based Spotify companion application, focusing on dynamic song visualization and user library metric visualization. Users will be able to create profiles with a username and password and link their Spotify accounts. The application will make REST requests to the Spotify API for user information.

The application will read a track's audio features provided by Spotify to create a dynamic data visualization of the current playing song. Data from the song will be fed into an algorithm to create a visualization of the song using relationships between visual aspects (color, motion, shape, etc.) and auditory features (tempo, pitch, frequency, etc.). The application will also provide static data visualizations of the user's library metrics by pulling user library data from Spotify and organizing the data into graphs, lists, and other data visualization formats.

After basic implementation of these concepts, we will attempt to implement a cross-platform link between a user's song library and movie soundtracks. We will also attempt to add virtual reality components to our application (specifically with the current playing track visualization).

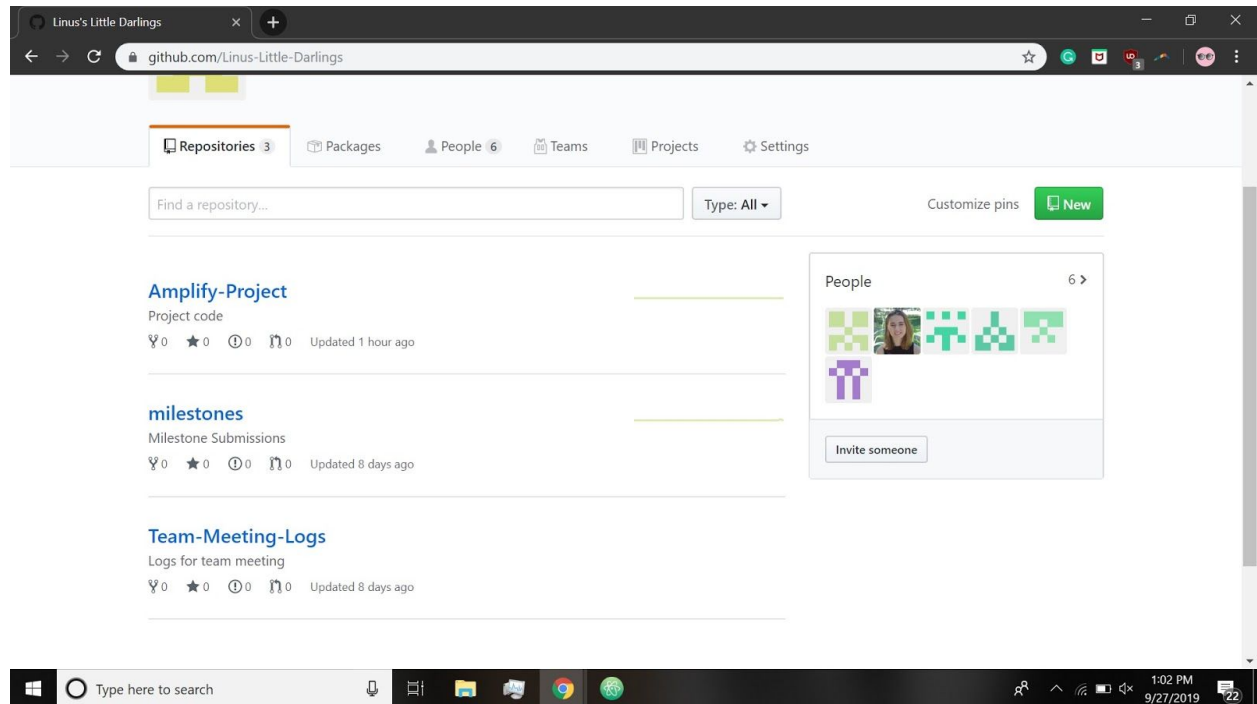
Priorities

- Visualization of current song
 - Mood details from Spotify metrics
 - Virtual Reality launcher for current song
 - Mood colors
 - Backup: Some other visualization of audio data
- Genius lyric integration
- Library metrics
- Movie matching
- Weighted playlist creation

Vision Statement:

Our application will be the ultimate Spotify companion for Spotify users who want to get more out of their music. It will be a browser-based application that offers a variety of tools to enhance a user's music listening experience with tools like dynamic audio visualization tools, library analysis metrics, better lyrics, and more

Version Control:



(TA said we did not need to share repo, as it is public)

Development Method: Our team will follow Agile to accommodate the various features we are looking to implement. We will be using Miro to keep track of tasks within each sprint. The team will have tri-weekly stand ups to discuss progress.

Communication Plan:

We communicate via GroupMe, which is a communication app. We will use this to update each other on progress on set intervals as well as to communicate newly identified problems that need to be addressed before meeting times. We also have set up a team Kanban board in the application Miro, which is typically used for corporate Agile practice.

Proposed Architecture Plan:

Our application is going to be a web-based app utilizing Angular.js on the frontend and Node.js on the backend, which will connect to a postgres database to store user information. We will definitely be using the Spotify API for getting music data, and will possibly be using the Genius API for lyric data and/or the OMBD API for movie data. We also may be using some external

javascript libraries such as AMCharts for data visualization, WebXR for possible AR/VR capabilities, and THREE.js for 2D and 3D graphics creation.

Meeting Plan: We are meeting Thursdays at 4pm for 2 hours at a time, the day before recitation. Our plan is to meet face to face at the library.