CS4530 Final Project: Covey.Town (feat. Spotify)

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Our Feature: Spotify Sharing

Covey.Town (here) is a social platform that simulates real-life meeting spaces where users can drift between virtual conversations. Early on we observed that Covey.Town lacks one of the most powerful modes of communication, music. Our project integrates the Spotify Web API into Covey.Town so that users can share their personal music activity with one another.

We developed a front-end display that shows the current Spotify activity of players in Covey.Town. This display has links to a player's Spotify account, top playlist, and current song they are listening to. Users now have the option to link their personal Spotify accounts during log-in and if so share their Spotify data with other users in the town.

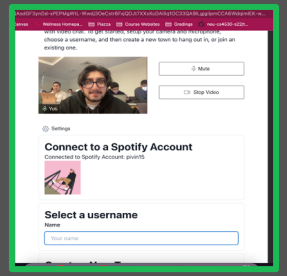
Our Technology Stack & Design

To have typing in our API calls, we decided to utilize an already existing Spotify API Typescript wrapper (here). In order to connect a Spotify account to the Covey Town app, we made alterations to the frontend code to direct users to the Spotify login screen and redirect them back to the Covey Town login page.

From that point forward, the authorization token needed to make API calls is set as a fragment in the URL. We then send the token to the backend in order to populate related fields on the backend Player class. When a new Player joins a town, the townJoinHandler initializes that Player and loads all the data via API calls to Spotify. At this point, using React hooks, we can then access these fields in the frontend Player for displaying.

Demo and Source

Our demo site is available at https://friendly-nightingale-cac19d.netlify.app, and our code at our GitHub repository



Future Work

We achieved our goals of connecting the Covey.Town codebase to the Spotify API and displaying Spotify data of all the users in a Town while allowing clickable access into another player's account. While we met all our goals, there are many ways we could improve this project going forward. Future work can be divided into two categories: upgrades to current features, and new potential features that increase collaboration, shareability, and functionality of Spotify within Covey.Town.

Our current implementation does not support the ability to automatically refresh Spotify data, if a user skips or changes a song while in Covey.Town we want to automatically display the new data. Expanding our feature to include podcasts and other media, in addition to songs, would also be helpful for users. Currently, to access another player's spotify information, the user is taken to a new webpage on the Spotify website, creating a pop-up display of the data within the Covey.Town page would be a convenient feature. Finally, our access tokens are displayed within the URL of the webpage, adding additional security to our feature is an important upgrade for the future.

Given the depth of the Spotify API, there are a large number of features we could look to expand into. This could be increased user control, allowing users to pause, play, and skip tracks from within Covey.Town. We could also expand into more collaborative features, such as broadcasting ones music within a conversationArea, allowing for communal-listening parties, or even the creation of personalized blends. Basically, anything one can do with Spotify, we can add to our app!