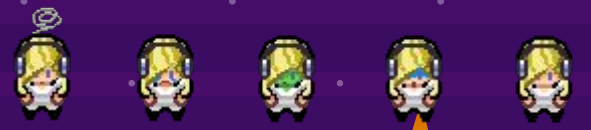


CS4530 Final Project: Covey.Jam!



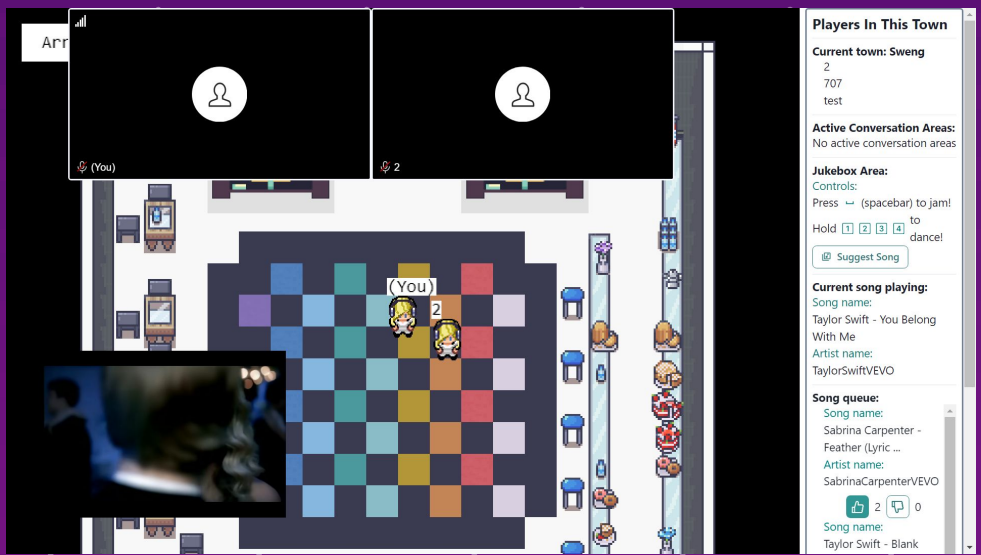
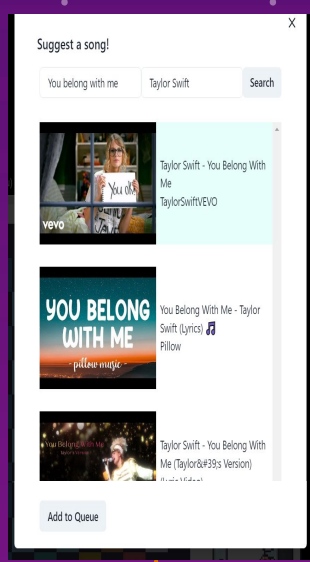
Group 707: Yuchen Zhang, Vatsal Mehta, Dat Ngo, Carla Delgado



Our Feature: Jukebox Area

Covey.Town provides a virtual meeting space where different groups of people can have simultaneous video calls, allowing participants to drift between different conversations, just like in real life. One problem we observed is that there is no way for users to have fun with each other and relax while in Covey.Town. We developed a new interactable area called Jukebox Area that allows users to have fun with each other by listening to music together, dancing, and expressing their real life emotions through their avatars.

In the jukebox area, users can suggest and queue songs they like on the jukebox and also vote on songs others suggested. Then, users can then listen to the suggested songs together. Users can also make their avatar dance by pressing the keys 1-4 and vibe with the music. When the user's camera is on, the emotion the user is showing will reflect on the avatar.



Our Technology Stack & Design

We implemented the Jukebox area feature in the existing covey.town codebase. The area is represented as an "object", that is constructed when the map loads and rendered by Phaser, and the area visual is made up of tiles that can be edited using "Tiled." On entering the jukebox area the player sees the React UI sidebar extended with instructions to interact with the area, and the currently playing song, song queue, and a button for a form to suggest songs using a React/Chakra modal. The sidebar extension uses React hooks and controller event listeners to update. Users can search for songs with the help of the YouTube Data API. The Jukebox area is tracked by the CoveyTownController backend, and synced to each client using socket-io. Calls are made to the AWS Rekognition API to identify the user's emotion from video stream. Avatar emotions and dance moves are represented by pixel art done in GIMP. TownGameScene was modified to create dancing animations and store all new sprites. All functionality is tested through a mix of Jest suites and local rendering. The site is deployed using Render.

Future Work

One extension we want to integrate is a dance-off challenge in Jukebox area. This would provide a fun way for user to interact with each other by combining our music player and dance moves into an interactive activity.

Additionally we started discussing filtering the youtube search results so that only songs would appear, as opposed to, say The Bee Movie. This would be a good feature to improve the user experience, but we decided it wasn't a necessity for our project and prioritized other issues.

Demo and Source

Our site is available to demo at

<https://covey-jam-front.onrender.com/> and our source code at <https://github.com/neu-cs4530/fall23-team-project-group-707>

