

# CS 4530 Final Project: "Sketch Board"

Group 202: Gursimar Chadha, Siddharth Gupta, Venkat Pamulapati, Jan Jacob

## Our Feature: Sketch Board

Currently in Covey.town, users are only able to communicate over voice, video, and text. While this is nice, it leaves out the ability to richly express more abstract or complex ideas that only drawing can communicate. We want the users of covey town to be able to join a sketching session that allows them to make diagrams and draw on a sketch pad that all their collaborators can see in real-time, adding one more dimension of expressibility in Covey.town. The sketch board can also be used as a platform to play a drawing game. In either case, there is a point system on the leaderboard which can be used to track points in a conversation or points scored in a drawing game.

## Future Work

We originally planned to provide more customization to drawing strokes in the board such as stroke width and shape. We were not able to find a viable way to incorporate it into our current model of a sketch board so future work may entail reworking how we work with the array of pixels to allow for this. Future work may also include a tracking feature which shows other collaborators who is drawing what.

## Our Tech Stack and Design

We implemented a new InteractableArea called OfficeArea in the covey.town codebase. A SketchBoardArea is a type of OfficeArea that allows for drawing on a sketch board. A user can then walk into the SketchBoardArea and press space to open the modal. The frontend UI communicated with the Model in the townService backend via the AreaController. We stored our drawing data in the model as first the board state, a 2d array of colors, and a stroke, which is a list of colors. This way, when a user draws something, we can pack all the pixels they drew into a single stroke array which gets sent to the backend. The stroke is then used to update the 2d board array.

The sidebar provides information on the joined players as well as provides hosting options to the board leader. The leader can enable and disable drawing as well as limit who can join the sketch board session.

We used github actions to automatically run our Jest test suite and deployed the frontend and backend services on render.com

## Demo and Source code

Source code: <https://github.com/neu-cs4530/covey-town-project-team-202>

Demo site: <https://covey-sketchboard.onrender.com/>



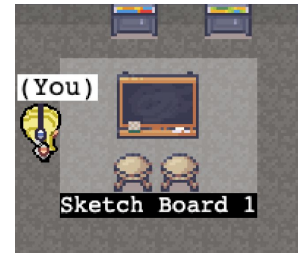
Users can draw on the board with their mouse and select different colors in the color picker. Users can also enter a custom hexadecimal color value for more customizability

### Player Info

b0P7Dpfi9M2mk3o-H7ZD2 0

### Board Settings

- Allow Drawing
  - Allow More Participants
- Leaders get access to board setting and can add/subtract points from each user



Sketch Board area where users can press space to pull up the UI