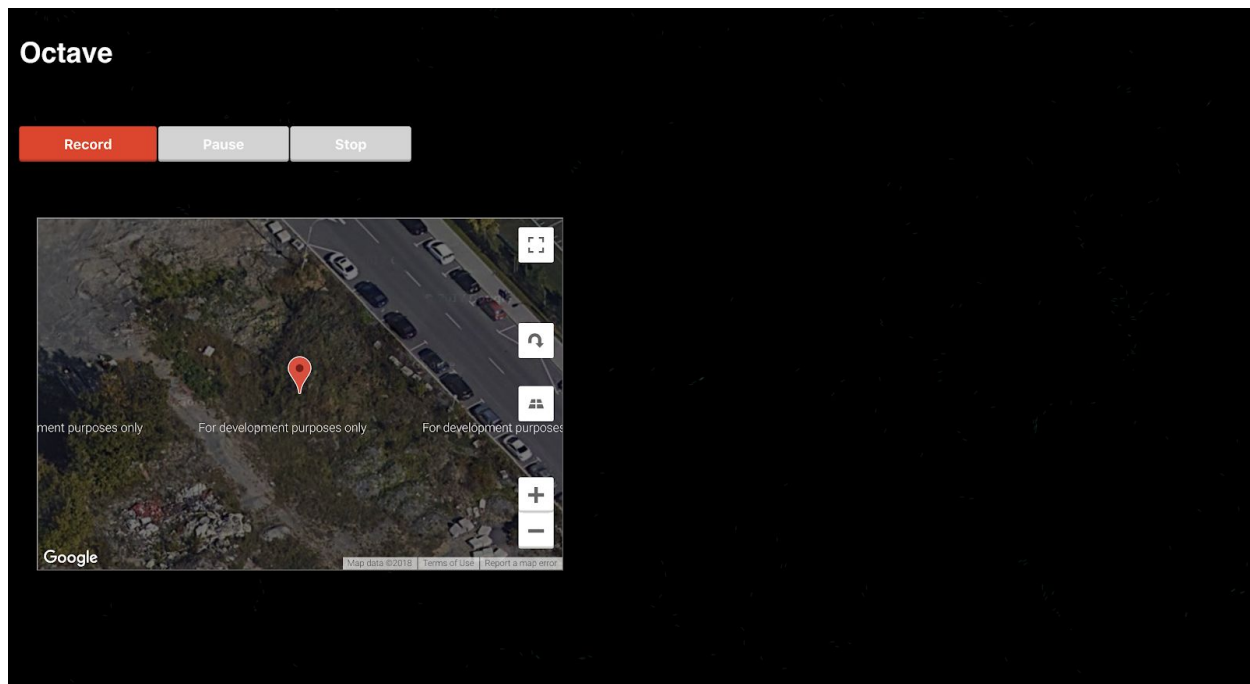Hugo Carrion
ID 40006397

# Octave Documentation

## Home Page

Although the final version of Octave for this project was unfortunately not completed, some of the main functionalities can still be used on this final prototype.



**Octave home page**

The user enters the site and is welcomed with the Octave recorder, a simple program that is able to record, pause and stop a recording. Once the user has stopped the recording, the user will be able to replay the sound which can be saved to the computer disk if desired. The main option of the program is the "upload" button which will upload the sound to the server which will then be automatically displaying a frequency graphic where the user can see the frequencies for the sound.

The graph is partly hidden by the map which shows the user location which was intended to also show other users locations which would be then used to make connections between users.

## Background

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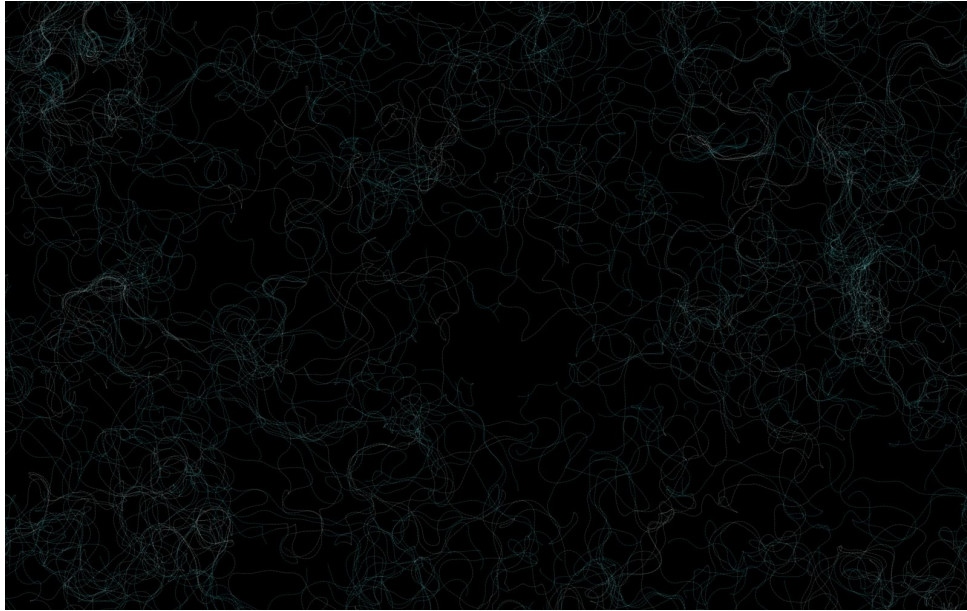

**Octave original background**

I wanted to give Octave a modern and minimalist feel but also something to make it look alive and in constant movement. Using a Javascript program, I wanted to give the program a look that incorporated random patterns in the shape of waves or lines which represent the sounds that are always in constant evolution just like the frequencies of sound.

**Functionalities**

Octave was conceived thanks to a combination of several programming languages: HTML and CSS were used to create the basic structure to build the program upon it while CSS gave the style.
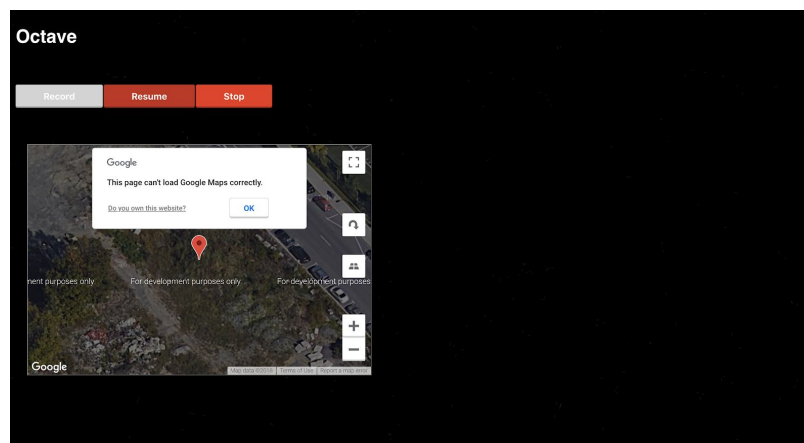The main functionalities of the program are based on Javascript such as the recording and player functionalities and the map as well. The use of P5 libraries in order to analyze the sound are also essential for the use of this program.

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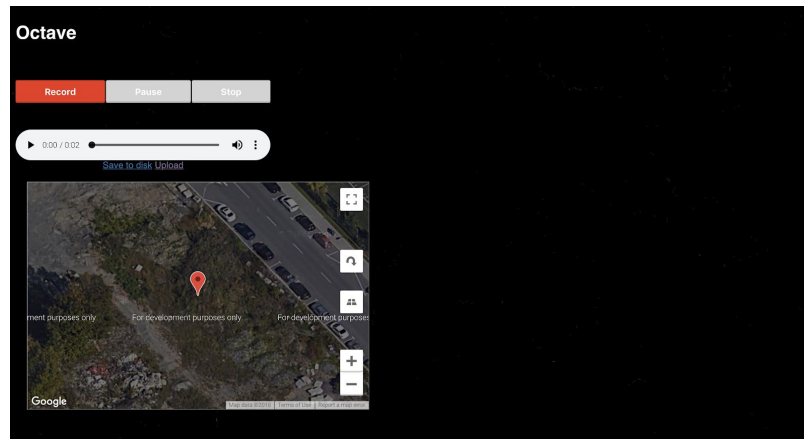


**Octave player**
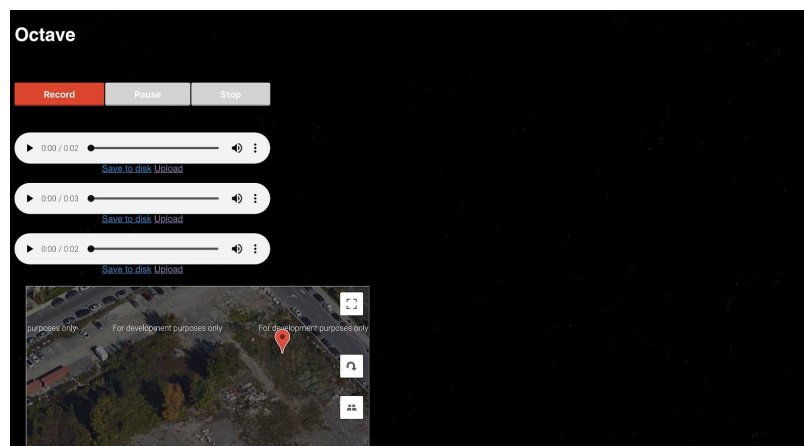


**Octave can record several sounds, save and upload them**



**It is possible to pause and resume the recording as well**

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Octave is able to record sounds from the computer's microphone which are then analyzed using a p5 library and displayed in the form of wave frequencies.

The PHP file is used make a call to the server to store process the sound file as .wav and store it in the server.

JSON Makes an asynchronous call to the upload.php file that will later process the sound file on the server side.

Octave also uses an API which shows your geolocation coordinates which were meant to show other users close to you and be able to interact with them and play their sounds.
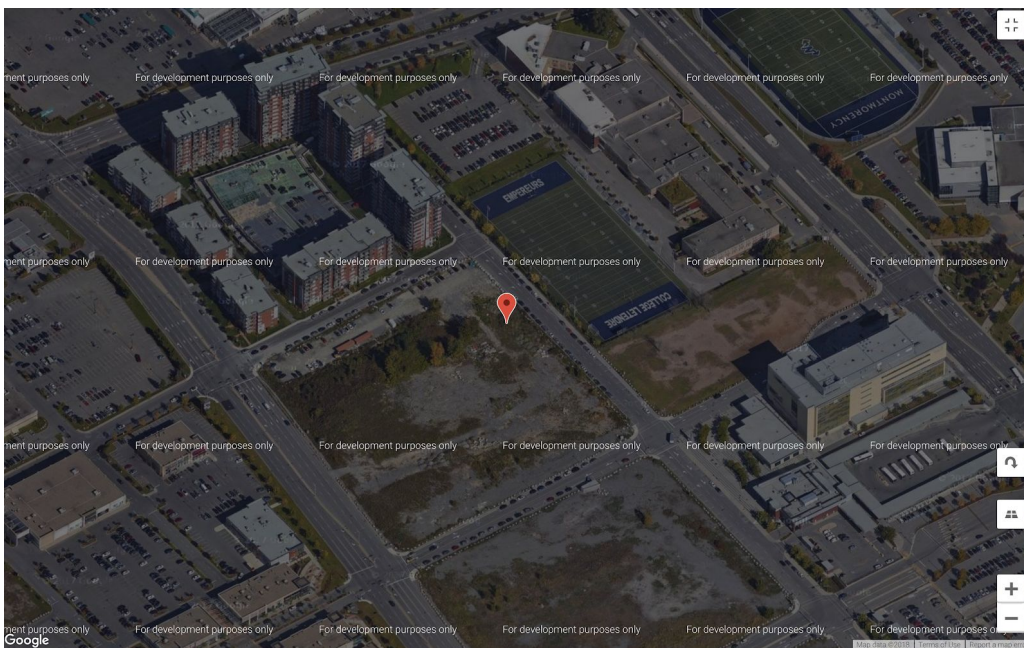


**Octave geolocation map (by Google)**

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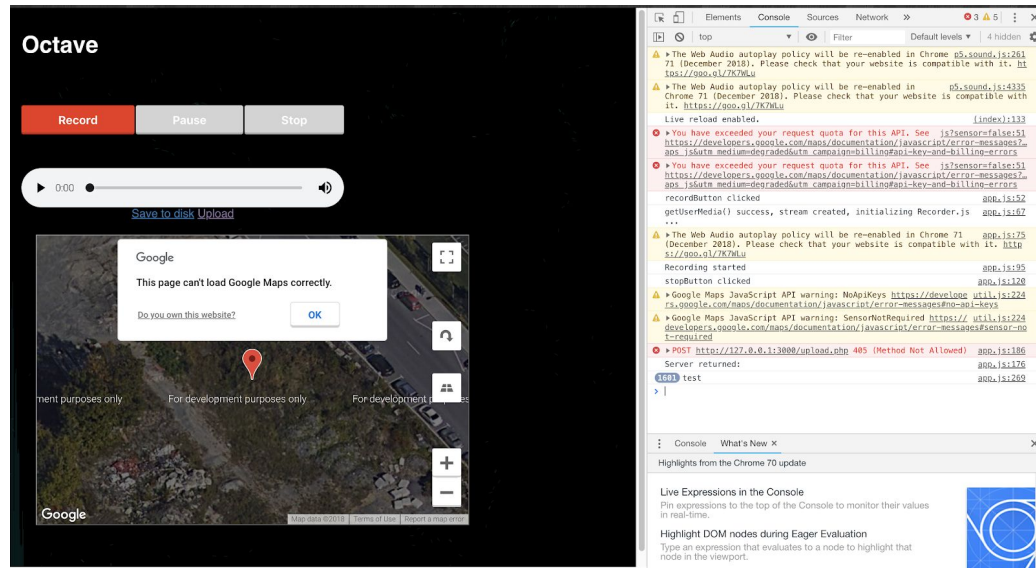


**Screenshot of the console**

**Research**

This project would not have been able to come to life without all of the resources I was able to find online. All the sources from youtube, github, stackoverflow, and the p5 library can be found below.

https://github.com/addpipe/simple-recorderjs-demo (main recorder)


https://stackoverflow.com/questions/30407610/how-to-store-geolocation-coordinates-into-an-array-with-javascript/30407748?fbclid=IwAR29lBf62Avuasj_6KVoWojjIZBaRW3z5aJPQmXxLKHSsvhce3v_MuiLb2w (API Geolocation)

https://www.youtube.com/watch?v=Qf4dIN99e2w&t=3s (background)

https://p5js.org/reference/?fbclid=IwAR2ARHw93vyQG0l3I4-MhAEWowqIX_bmKk3Np3vkMCfQDE_Oo13eOzJtsAo#/libraries/p5.sound (frequency display)