**Audio Visualizer Project Documentation**

Project Description: To build on the Web Audio Visualizer ICE and create a unique interactive audio visualization experience that utilizes the Web Audio and Canvas APIs.

**Elucidate how you met the 6 categories of requirements and be specific about any extras you did -i.e. where you went above and beyond.**

**1. Usability and overall UX (15%)**

Easy to read, made it categorized by track, canvas API (waveform or frequency), display options, display modes, color sliders, curve effects, and default effects. Chose an easy to read font Quicksand and a lighter shade of black to make looking at the controls and visualizer easy to look at.

### 2. Interaction Design (15%)

The user is able to choose form 3 songs, Breaking up my Bones by Vinyl Theatre, Running Out by Astrid S & Matoma, and Tongues by Joywave. These songs have dubstep type mixes to them as well, which fits my theme of the design having a dubstep vibe to it. The user is able to manipulate the colors using RGB sliders, the alpha channel of it (brightness), display modes including circle radius and audio delay as well. I also used the default effects, and added some more including grayscale, background gradient, and curve effects as well.

### 3. Canvas API (25%)

The canvas API is able to create lines, Bezier and cubic curves, circles, rectangles, and a gradient. I used various context state variables to do this such as adding rgba values with a makecolor function and individually adding rgba values, fillstyles and strokestyles as well. I also used push and pop methods on the canvas whenever I wanted to save a specific setup of an effect or default options I wanted to use.

### 4. Web Audio API (15%)

For Web Audio API, I set a select option bar to have the user be able to view the frequency and waveform data. I also added a delay node, which has the ability to delay the audio from specific values ranging from 0.0 to 1.0.

### 5. Media and Presentation and CSS/HTML (10%)

Songs are at least 30 seconds long (3-4 minutes) and are mp3 files. Used the embed font Quicksand o n the page, and gave the rest of the page a clean, organized look, with the audio visualizer on the right side.

### 6. Code (10%)

No jQuery was used, no JS libraries, used “use strict”;, used no global variables, separated functions appropriately, following appropriate naming conventions, every JS statement ends with a semicolon with no errors. Commented each function explaining what it does as well as essential commands including for loops and specific effects.

### 7. Above and Beyond (10%)

Added functionality including a grayscale option, clean looking UI, hovering over Dubstep Visualizer title turns the underline red, made a red theme overall.

**Discuss what went right and what went wrong. List what features you would have liked to add to the project if you’d had more time/energy.**

My project was filled with positives and negatives, mostly trying to find time to complete my project. I wanted to keep the rectangular theme I had from my audio visualizer 2 and prototype, however, I was trying to figure out various ways to implement that into my project. This weekend I figured out how to complete this and spent that time polishing my project while still retaining my original idea. If I had more time and energy, I’d use that to create something more impressive and something that stands out more, however, to do that, I’d need more time to think about ideas since my idea was pretty basic.

**Declare any non-course resources (libraries, sounds, images, tutorials, sample code) you utilized) in both your code comments, and in the final documentation of the project. Note: You don’t have to document that you used the code I gave you in cla**ss.

I used various tutorials given in class/assignments:

<http://igm.rit.edu/~cavigm/330/> (tutorials listed here relevant to project)

Audio Visualizer 3: <https://mycourses.rit.edu/d2l/le/content/683895/viewContent/4914024/View>

W3Schools: <https://www.w3schools.com/tags/ref_canvas.asp>

Quicksand Font Library: <https://fonts.google.com/specimen/Quicksand>

**Grade yourself and your partner (if applicable). Justify your grading. Use a grade of 0-100%**

90%, requirements fulfilled went a bit beyond, however, didn’t exceed anything amazing and may change this in the future to make this audio visualizer impressive.