

Final Project: Freestyle Rap Assistant

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PART 1

The purpose of the Freestyle Rap Assistant is to allow the user to select a type of instrumental and be given words to incorporate into their rap as they are practicing to help the user think outside of the box. It also provides an entertainment aspect because there is a visualization of the music which the user can also customize. There isn't much **information** to convey, it's mostly what the user wants when using this tool. I would say it's interesting and engaging because it's a unique tool that doesn't already exist that allows users to practice freestyle rap without having to find a cypher (a group of rappers). It's **interesting** because of the visualizations associated with it. The **target audience** is anyone who wants to learn or practice freestyle rap. Since there the user can choose the difficulty of the words, any level of rapper can use this tool to get better at the craft.

PART 2

- **Welcome screen**
 - i. The interaction is mainly a splash screen with a hype background to entice the user to continue.
 - ii. There isn't really an interesting use case, but you click the button to continue onwards
- **Form wizard**
 - i. This is a wizard to guide the user to select their preferences for the tool, which will be saved for use when they enter the tool. It's an optional step, as the user can go straight to the tool if they really want to, but it further gives instruction and understanding, which is especially helpful for a new user. Please note that there may be a little hang time as the javascript loads.
 - ii. This form uses animations to guide user to the next step in a seamless fashion. click "continue", to see the magic! You can also select the options, but that's not really exciting
- **Freestyle Tool**
 - i. There's a lot of cool options on the tool page. If the user filled out the form, they can immediately start the assistant. If they don't at least choose a level of beat or type of visualization, they are prompted to do so with an alert, and nothing happens. But they can see the music visualized, as well as use helper words if desired in order to practice rhyming on the fly.
 - ii. To reproduce cool interactions, you can click on the question mark to get some more information on how to use the tool. You can click edit

preferences to change your choices, and the option will be saved when you reenter the preferences dropdown. To see the visualization of the music, you can press start. To stop, the start button changes to say "stop" so you can click that to refresh the page.

PART 3

In order to create my web app, I am using:

- Web Audio API
 - i. Web Audio API: This allows me to take an mp3 file and analyze its features such as frequency to turn into data for my music visualizations.
 - ii. I chose to use this because it is a simple API that is straightforward and allows a lot of customization and flexibility.
 - iii. I am using it to analyze the instrumental music and create visualizations based on the data I gather about the music I have.
 - iv. It adds to my website because it allows me to create the visualizations that capture the user's attention while they are using the Freestyle Rap Assistant.

PART 4

I didn't change too much from the original prototype. I changed the placement and types of buttons a bit (radio vs dropdown), and I don't have a loading screen because my tool is pretty fast (at least on CMU wifi). I also removed a second visualization because it was harder to implement than I thought, but I definitely want to explore this API more in the future.

PART 5

I had MANY challenges. The biggest was working with audio, and how finicky it is. There are also many rules that browsers have in terms of utilizing audios, so I coded in a way to avoid interacting with those issues. I also had a lot of trouble with the sliding menu, because the placement would not go where I wanted and I had no idea why.