

Working Prototype Known Problems Report

Spectrogram shows the old wave files upon boot up

Input: Homepage boot-up

Location: pianoSynth.js

Action for Removal: Don't display the spectrogram div until the genetic algorithm has run.

File specifications

Input: The audio file must be a specific sample rate, bit depth, and mono .wav files

Location: This causes an error in the create_spectrogram() function.

Action for Removal: Create a wrapper that can convert incorrect file types to correct file types.

File specifications

Input: The audio file must be a specific file type (.wav) no more than 30s

Location: The run_ga() function which runs the Genetic Algorithm.

Action for Removal: Create a wrapper that checks a file type and possibly converts it, or sends the user a warning.

Homepage refresh

Input: Navigating to a different page, then Navigating back to the home page

Location: synthesizer (tone.js) playback goes back to default sound after the user navigates to another page and then back to the home page.

Action for Removal: Save the synthesizer parameters in a user setting that can be referenced when still active on the page, only being written over when the genetic algorithm is run again.

Using the Mouse for Octave Change

Input: Mouse Input right on top of the "-" or "+" sign on the octave key

Location: Octave Key button press

Action for Removal: Integrate the minus and plus sign into the button instead of being its own div on top of the button.

Genetic Algorithm can be Nondeterministic

Input: Given an input audio file

Location: The genetic algorithm function is run with the input audio file

Action for Removal: Create a more efficient algorithm so that we can have a better fitness function and run more generations in a small amount of time.

Essentia Library

Input: Downloading dependent libraries

Location: Using the balanced fitness function in the genetic algorithm

Action for Removal: Either create a web host environment that has essentia downloaded on it or remove essentia from our project completely.