I created two sonifications of wildfire data from the Oregon department of forestry. First, I downloaded a CSV file containing various information about wildfires in Oregon from the years 2000 to 2022. Looking at the data in JupyterNotebooks, I decided that it would be interesting to sonify the difference in the total acres burned from wildfires started by humans vs those which were started by lightning. I used pandas, numpy, and matplotlib to create a new CSV file with more concise data to work with, and plotted the line graphs shown below.
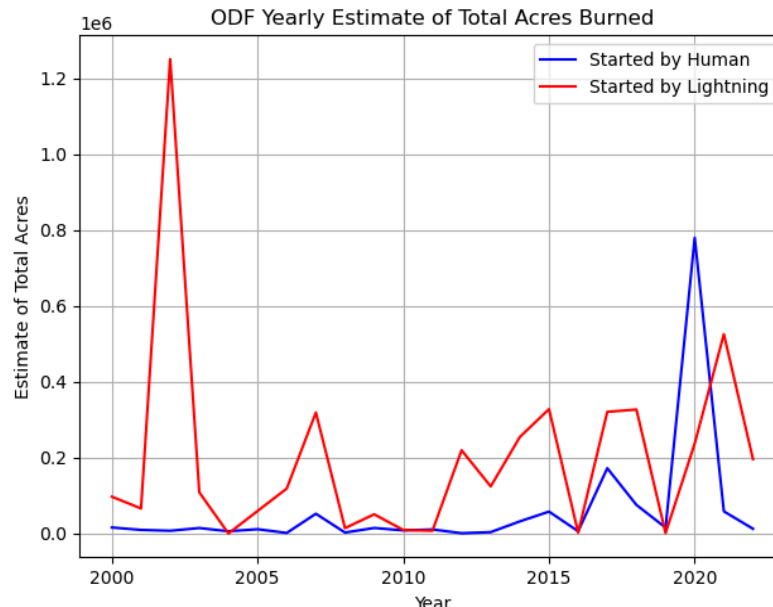
I decided to sonify the data in the two sonifications primarily by frequency and amplitude. I chose different timbres for each of the lines, keeping the data associated with humans relatively simple with a sine wave. I used a saw wave to sonify the lightning line, because I felt like the timbre needed to remind me of something harsher than that of a sine wave.

If I were to spend more time working on this sonification, I would like to be more intentional with the ranges of the data (in terms of both frequency and amplitude), and try an alteration of the panning. I also think that the length of the sonification is fine, but it would also be interesting to intentionally have it at 23 seconds so that it plays for 1 sec/year.

The graph above demonstrates what is heard sonically. The human-started wildfires did not burn very many acres from 2000-2015, and then spiked in the later years of the range. The lightning-started wildfires had an initially high spike in the early 2000s, and had more variable, medium spikes following this. Sonically I discovered from listening that there is a point at roughly 2019 where the graphs trend similarly at the end of the sonification, though at different rates (a similar local minimum which then spikes). It would be interesting to investigate human and natural phenomena over these years to draw conclusions about the sources and impacts of these fires.

Source: "Information & Statistics." *Oregon Department of Forestry : Information & Statistics : Fire : State of Oregon*, www.oregon.gov/odf/fire/pages/firestats.aspx. Accessed 16 May 2024.