21M.369 (Studies in Music Technology) Final Project Statement

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My project is inspired by my time spent in the great forests of the world. There is nothing quite like being deep in the forest, alone with the sounds of nature and your own breath. In Alaska, bald eagles with their distinctive chirps circle the treetops while a myriad of tiny streams trickle down the hill around you. In Georgia, songbirds sing beautiful tunes while the wind rustles the leaves of the big oaks. In Brazil, monkeys, birds, frogs, and many other animals fill the jungle with a dazzling array of sound. I wanted to replicate these kinds of experiences through affective music and imagery, making the user feel like they are in some kind of alternate reality that pays tribute to the forests of the world but is also unique in of itself.

The idea for this project began with my 3rd mini project for this class, where I made a single forest scene that had 4 clickable birds. Each bird had a chromagram of a recording of its singing that could be clicked on to loop a sequence based on that chromagram. A chromagram is a graph showing the frequency content of an audio signal at each time step compressed into the 12 notes of the chromatic scale. The sequence was synthesized using Tone.js and was intended to sound somewhat bird-like. The addition of a ping-pong style delay widens the sound and gives the feeling that there are many more than just a few birds. You could click on multiple birds to layer the sequences with different rhythmic patterns.

While the intent with Project 3 was to show the user the data (with the chromagrams) and make it clear that it was based on real birds, for my final project, I

focused more on the affective experience of being in the forest. The objective is to envelop users in a surreal, almost psychedelic soundscape, prompting them to focus on the magical atmosphere rather than the authenticity of the bird songs. Consequently, I've opted to omit the chromagram buttons, encouraging users to interact solely by clicking on birds or other features within the image. I wanted the user to have to investigate the image to figure out how to interact; thus, there are no text prompts or instructions. Instead, as one moves the mouse around the image, some objects get bigger when hovered over, implying the user should click on them.

One piece I took quite a bit of inspiration from that we looked at in class that has some similar qualities is the Helios project for the album Yume. I think this project feels very cohesive in terms of aesthetic and I really enjoy the interface, which involves dragging items in the image around to control different sound parameters such as filter frequency or the levels of different tracks. I used a very similar dragging interface to control the stereo panning of each bird sequence. Dragging a bird to the left of the image pans left, and to the right vice-versa. I made this choice to allow the user to increase the stereo width of the music and make the soundscape even more all-encompassing. Another sound design source of inspiration is Arachnodrone. There are some immediate parallels between Arachnodrone and my project, as both center the natural world and have a spacey, somewhat ambient sound. I really like the sound design in Arachnodrone, especially the stereo elements, and have tried to emulate certain parts.

For the imagery, I used Midjourney AI to generate psychedelic images of nature as the background. I then edited the images in Photoshop to make the birds and other

animals able to be dragged around the screen, cutting them out and using the generative fill tool to fill in the background. One source of inspiration for the visuals was William Shaw's project in visualizing bird calls. The imagery here is a little more abstract than I made mine, but it is quite evocative and beautiful.

In essence, my project serves as an immersive compositional tool, enabling users to craft layered soundscapes reminiscent of the natural world. While not strictly a sonification experience or a game, there are elements of discovery embedded, akin to gaming dynamics. I want the user to have to be curious and discover certain elements of the interface on their own (i.e. hidden animals/objects, parameters for dragging around objects, etc). One game that is brought to mind is My Singing Monsters, where the player clicks on different monsters to layer sounds and make a song. While it has the same fundamental mechanics, the intent of the game is very different, and it is not meant to replicate any kind of natural experience. My project also allows the user to build more of an ambient soundscape than a song.

The kind of soundscape I want to create is probably best described as Ambient Electronic Music, a genre that runs deep and wide. One example that I drew inspiration from is Mattia Cupelli's compositions. He seamlessly intertwines natural sounds, such as the ocean and leaves rustling, with synthesizer pads, strings, and other samples and instruments, creating a really beautiful and melodic soundscape that with the right imagery could transport the listener away to a different place, which is truly at the core of my project. I used elements of his compositions in my own, adding features in the scene that would trigger water flowing and leaves rustling sounds. All in all, I believe I

have created an interface and experience that allows the user to make beautiful, nature inspired music that submerges them into the visual and aesthetic tapestry of the image.