

Alvin Zhou

Professor Dominguez

VIS 160

### Alvin's artist statement

My senior project aims to develop an interactive music visualization system that transforms both sound and human movement into an immersive environment. This idea came from a longtime personal goal to be involved with music, as my relationship with sound began in high school through countless hours exploring different genres. Over time, through searching for different rhythms and sounds that could shape my mood and energy, I started to realize that music was not something just to listen to, but something that could be experienced spatially and physically. This realization deepened when I discovered electronic dance music at festivals and raves. What captured my attention the most was the combination of visuals, lighting, and crowd energy to create an atmosphere that extended far beyond just music. Although I could only access these experiences through video, I still found myself drawn to them. I didn't really think of it as design at the time, but looking back, it clearly shaped how I see things now. The merging of both audio and environment felt different, and I began to notice how, together, they could influence emotional and physical response.

This obsession still drives how I approach art. Rather than treating music visualization as a purely reactive system, my project aims to recreate a feedback loop where participants can actively shape the audiovisual experience through their own movements and presence. While working on this, I kept coming back to the approaches of will.i.am, Ryoji Ikeda, and Alva Noto.

Each of them works in very different ways, but together they helped shape how I think about combining interaction and sensory information.

The work of will.i.am introduces an important foundation for how user interaction can exist within an audiovisual system. In his collaboration with Mercedes-Benz, he developed a concept where music responds dynamically to the movement and speed of a vehicle. Because of this, the user essentially becomes the performer through physical input. That idea of taking movement data and turning it into audiovisual output directly connects to my own focus on user control. At the same time, his work is centered around individual control through a clearly defined interface. My project shifts that into something more collective. Instead of a single person controlling sound and visuals through a steering wheel, multiple participants influence the visuals through their movement, creating a shared environment shaped by group energy. In that sense, I am extending his idea into something more open and less predictable.

In contrast, the work of Ryoji Ikeda takes a more precise and data driven approach. In installations such as *test pattern*, Ikeda translates raw data into high frequency visuals that sync tightly with sound. His work feels very controlled and minimal, reducing complex systems into basic binary structures through light and sound. This had a big impact on how I think about my own system. I do not want visuals to just sit on top of the music. I want them to come directly from data. In my case, that means using audio frequencies and motion input to drive changes. However, unlike Ikeda's work, which is often fixed, my system introduces variation through real time interaction. So while I am using his precision as a base, I am also letting the system break away from it through user input.

Alva Noto adds another layer by focusing on imperfection and the physicality of sound. His use of glitch aesthetics turns what would normally be seen as errors, like static or distortion, into rhythmic elements. That shift in perspective changed how I think about visuals. Instead of trying to make everything clean and minimal, I started to see value in noise and irregularity. In my four screen setup, this shows up as visuals that not only respond to stable audio data, but also fluctuate and feel less controlled. While Ikeda focuses on structure, Alva Noto focuses more on texture and how sound is felt. My project sits somewhere in between, trying to balance both precision and unpredictability.

Looking at these three artists together, they represent different ways of thinking about audiovisual systems. will.i.am focuses on interaction and control, Ikeda focuses on precision and data, and Alva Noto focuses on texture and sensory experience. My work pulls from all three. I am building something that is interactive, data driven, and also physically engaging. Because of that, the result is not just a visualization of music, but an environment where people actually shape what is happening.

From a technical side, my project uses a multi screen installation. It relies on real time audio analysis and motion tracking working together. Audio gets broken into frequency bands, which then control visual elements like speed and brightness. At the same time, motion data from participants affects how intense and reactive the visuals become. This ends up creating a feedback loop between the system, the sound, and the people in the space. As more people move or react, the visuals shift with them, so the experience is constantly changing.

At the end of the day, my goal is to move beyond basic visualizations and create something more interactive and participatory within a concert or festival setting. I want to

recreate that sense of immersion that first pulled me into EDM culture, but also push it further by giving people direct influence over what they see. The work of will.i.am, Ryoji Ikeda, and Alva Noto gave me a strong starting point, but I am trying to take those ideas and apply them in a more collective and responsive environment. Through this project, I am exploring how digital systems can change the way we feel, move, and connect with each other in shared spaces.