Sean Kelly Klinkam - DXARTS 462 FINAL
Singing Bowl & Synth for Webcam

For my final project, I chose to do a real-time performance. I originally intended to control my synths live via a midi controller, but the project quickly evolved into something different when I began to implement OSC controls.

I was inspired by my friend Echo Zhou from the Data Driven Arts class to control my synth and other sounds using Touch Designer after she introduced me to a plugin called Media Pipe. (https://github.com/torinmb/mediapipe-touchdesigner) Media Pipe can analyze live webcam video for face detection, tracking the position of the body, and in my case - tracking the position of hands and individual fingers. Echo forwarded me an example Touch Designer file that implements Media Pipe for measuring the distance between the pointer finger and thumb, which I then modified to send OSC messages out to SuperCollider with that data. I then used this data to control parameters for my synth such as timing, envelope rise time, and a low pass filter. I also created an OSC function that triggers whenever my right pointer and thumb touch, which then plays a granulated singing bowl with a rate depending on the distance between the fingers of my left hand. With all the parameters mapped, I was now able to play the project by moving my hands through space, which was far more enjoyable than using a midi-controller.

For my pastiche, my randomly arpeggiating synth was inspired by Laurie Spiegel's Appalachian Grove, and the layered orchestral singing bowl grains were intended to mimic the layering on Bell Speeds and Wind Chimes.

My main goal was to explore ways SuperCollider can be controlled, as well as implementing a visually interesting performance aspect to my piece. While I am only controlling a limited number of parameters, I think this project is a great start for further exploring how Touch Designer and SuperCollider can interact and communicate with each other.

Thank you to Echo Zhou & Laura Luna Castillo for the Touch Designer / Media Pipe guidance and for inviting me to attend an inspiring Data-Driven Arts demonstration!