**Introduction**

To finish off this semester I wanted to take my pre-existing interest in sound synthesis and apply it to the world of motion tracking. To do this I used a *Leap Motion* Controller with a program written via MAX/MSP. My goals were to learn to comfortably navigate data as lists, arrays and tables in MAX, and to achieve pull polyphony, and pitch calculation with the synthesizer routed to the motion detector.

**Process**

This was my first time being exposed to the Leap so I started by familiarizing myself with its potential and mechanisms. I played with some existing applications and looked at the possible dimensions of detection I had to work with. I also showed some of my peers the Leap and asked them what they think an instrument using the piece of technology should look like. The universal response was to create something resembling a Theremin. However, Theremins feature two radio wave emitting control rods. I only have one Leap. The solution was too use the different dimensions of the Leap’s motion capture as controls for the unique sound parameters.

In my research I found an open source MAX patch from a Japanese programmer named Masayuki Akamatsu. His patch essentially allowed for MAX to collect data from the Leap controller with no preceding functions.

http://akamatsu.org/aka/max/objects/