Cody Stoner  
Must 382

Journal Entries

March 4, 2019: Researched extensively on the banana piano concept to figure out what I could change to make it better and produce music. Looked into what sensors could make it more interesting besides using just the analog pulses as the input. Came up with using a force sensor to check how much a banana is pushed, or a bend sensor to detect bend of the banana.

March 16, 2019: Narrowed in on what exactly I wanted to do with the bananas and how to attach them. I came up with having them hang from a board so I could detect the actual bend of the banana compared to the board. Still need to figure out how to attach the bananas to the board without putting to much stress on the wires connecting the bend sensor to the Arduino board.

April 15, 2019: Bought a 2x6 board to attach the bend sensors to. I taped half of the bend sensor to the banana and half of it to the board. It then was able to detect the angle of the bananas compared to the board. The main issue I was having is the bananas are all hanging at different resting positions due to the curvature of each stem. I changed the code so that each banana is being detected as its own object instead of doing all of them as one angle, so that I can get the exact angle of each banana.

April 22, 2019: I built the actual structure that will hold the bananas and contain all the wiring for the instrument. I took a 4 foot 2x6 board and cut two 12 inch portions and made legs out of those and a 24 inch board for the top. I then grabbed a 2x4 that was cut into 1 inch portions so I can attach the bend sensors to there and feed wires up through the holes that were drilled in the board. The main problem I faced during this was drilling into the end grain of the 12 inch portions. I pre drilled 3 holes in the end of each board to prevent splitting of the board.

April 23, 2019: Everything is attached and bananas were hanging from the board. There were several issues at this point. When the bananas are hanging for a long portion of time it puts enough stress on the bend sensor wires to make it disconnect and not be able to send signals to the board. Also, the midi signals were sending but couldn’t get anything to read it as input. This was solved when the midi cable was changed from the output section to the input section on the mixer. Once this was finished then everything came together to create sound just as I wanted. The next issue was the bananas started getting to rip to were the stem was so brittle that nothing could be tapped to it without falling off so I had to get new bananas and attach them and relive the nightmare of attaching them so the connection was stable.