**TITLE**

**LAB 07**

**SECTION 02**

**Camden Fergen**

**SUBMISSION DATE:**

**March 29th, 2022**

# How did you scale your values? Write an equation and justify it.

For scaling my values, for the scaleMagForScreen function, I used a simple equation where I just multiplied the magnitude by 39, resulting in it filling the screen up in either direction SC#01. In scaling the joystick for the screen, this was a little harder. I wanted to make sure I was filling up the screen all the way left and right but because it was +-128, I couldn’t just multiply it by 39 again. This time I figure out that 128 / 39 was around 3.28, so I figured if I divided the magnitude by that it would keep it within the limits of the screen. Also, by not converting it to a double and keeping it as an int, I was able to make sure I always got whole numbers instead of some funky numbers SC#02.

# As your experiment with the roll and pitch, what do you notice about the graph’s behavior near the limits of its values?

Near the limits of its values, it got less exact as converting 128 to 39 removes some of the smaller details leading to a less accurate graph, which you have to do sometimes otherwise it’ll get much more complicated than what is need/can do.

# Overall

This lab was really fun, and I enjoyed making a graphing tool how we did. I though it was a pretty good idea to just use simple text output instead of trying to use some library that none of use knew how to use and we would have gotten confused, overall, 10/10 lab.

# Screen Shots

SC#01

A screenshot of a computer

Description automatically generated with medium confidence

SC#02

Text

Description automatically generated