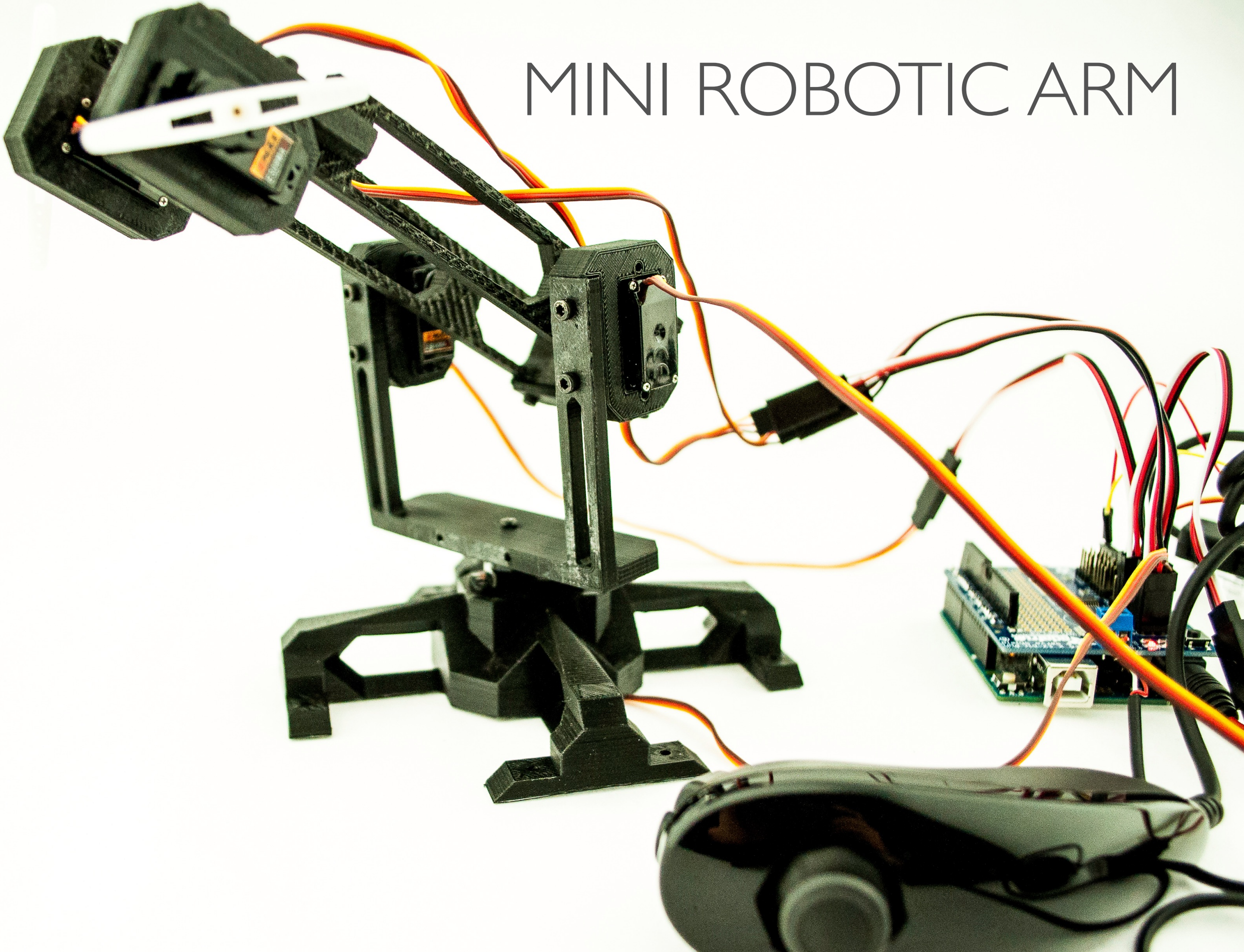
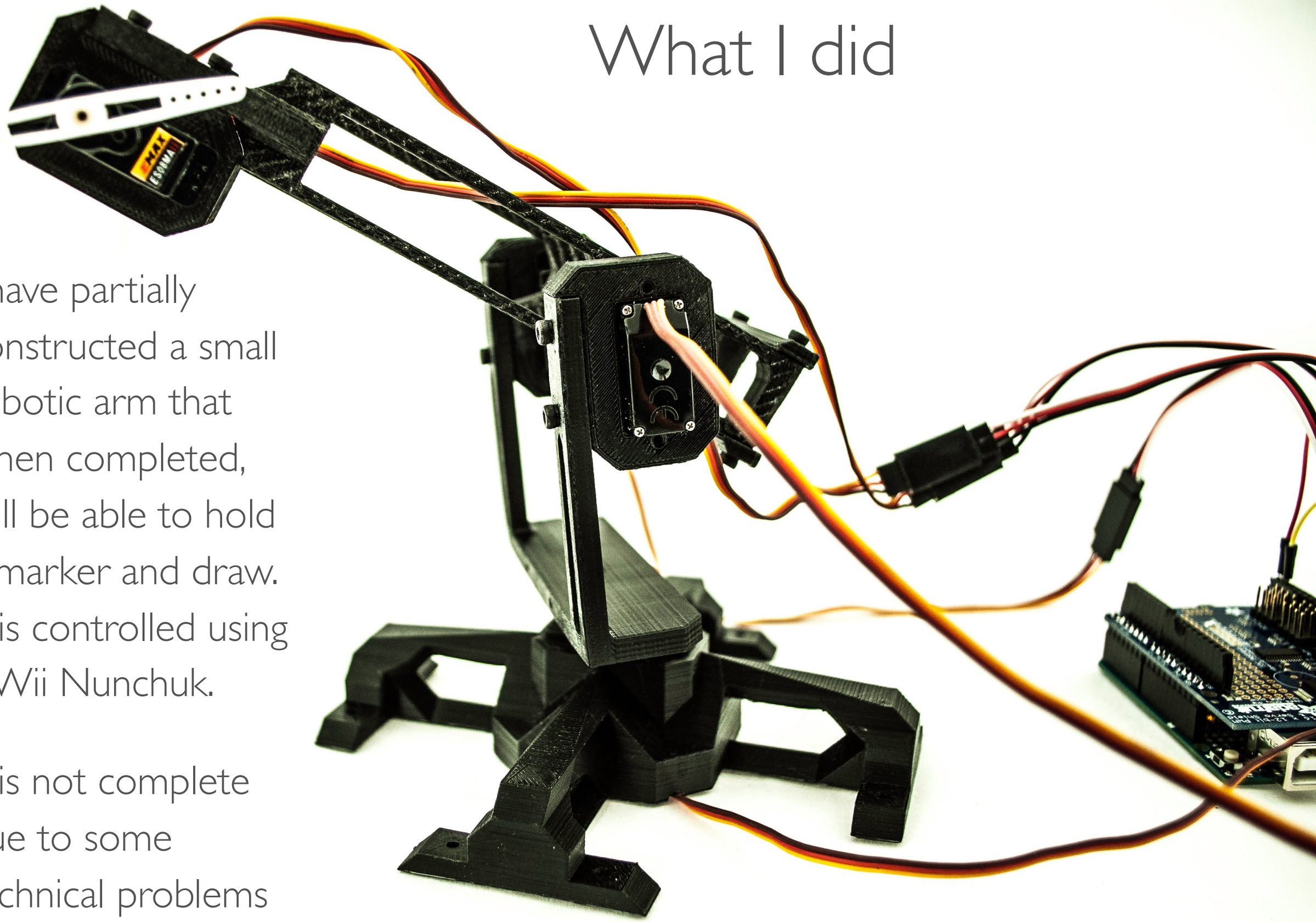
# MINI ROBOTIC ARM



# What I did

I have partially constructed a small robotic arm that when completed, will be able to hold a marker and draw. It is controlled using a Wii Nunchuk.

It is not complete due to some technical problems



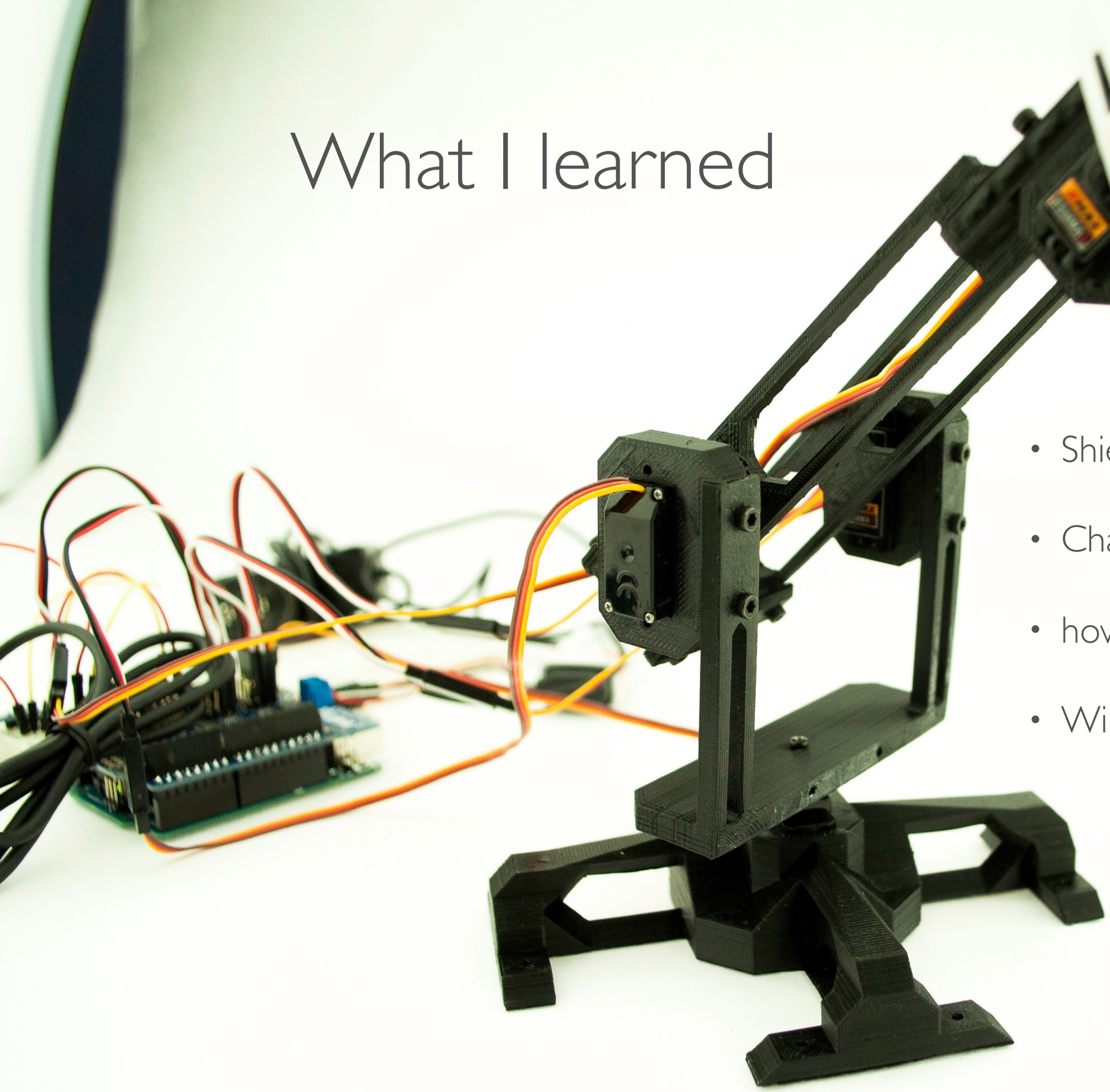
# How I did it

- I designed the structural components in SolidWorks and 3d printed them.

- I figured out how to read the accelerometer and joystick inputs from a Wii Nunchuck using a WiiChuck shield, and use them to control servo motors

- Used an Adafruit 16 Channel Servo Shield as an Arduino Uno only has 6PWM pins

# What I learned

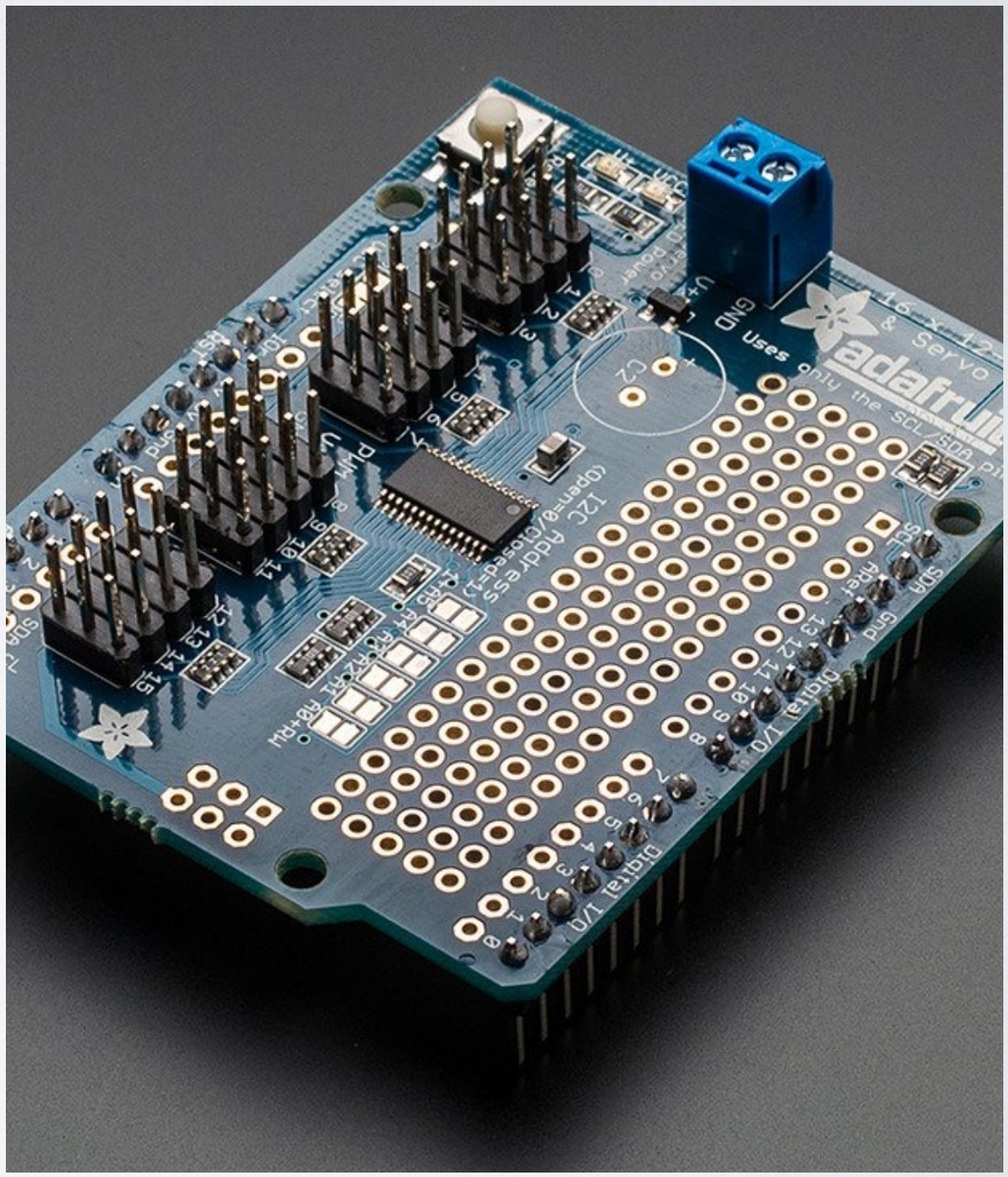


- Shields are complicated
- Change conflicting I2C addresses
- how to properly solder
- Windows 10 is unreliable

# Shields are complicated (at least the ones I used)

- The shields I used both had custom Libraries, which made it harder to learn how to use them at first.

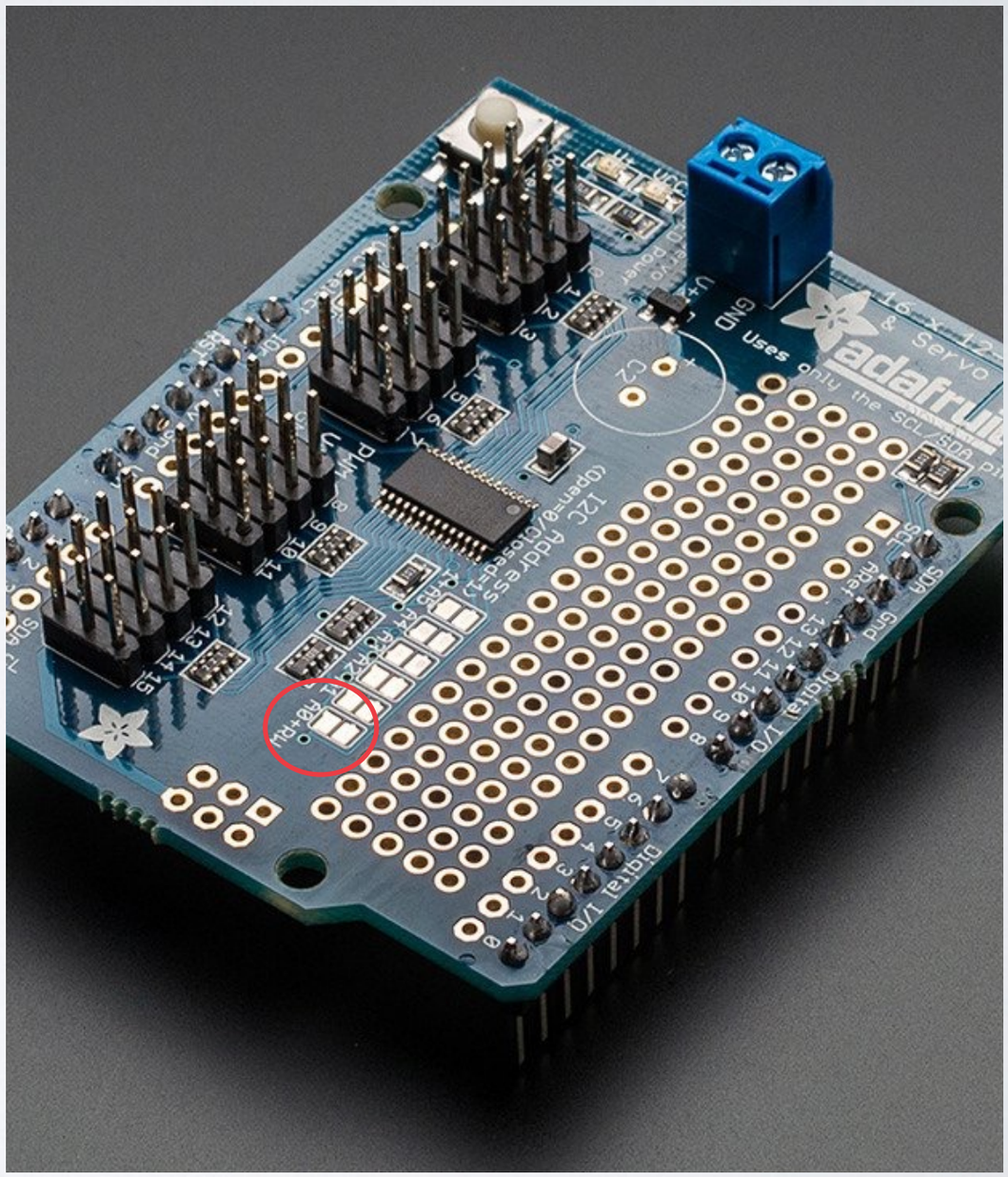
- Learned how to manually add a custom library



# Conflicting I2C Addresses

- Both Shields were using the same pins (A4, A5).

- Changed the I2C address for the servo shield, this fixed it



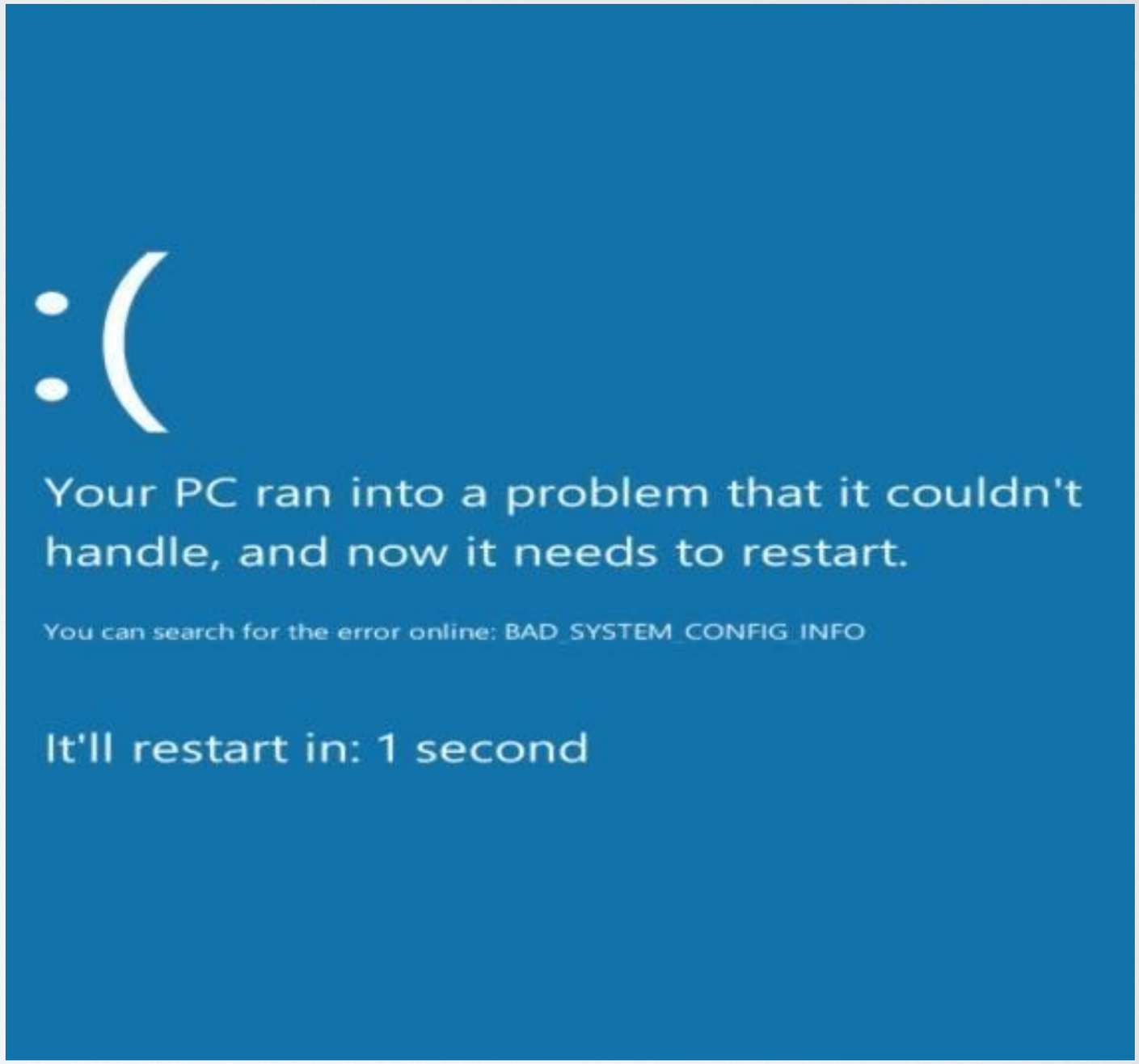
# Proper Soldering

- TA Leah and Micheal Shiloh demonstrated proper soldering techniques to me

- Mini  Volcanoes

# Windows 10 is Unreliable

- Why did this have to happen



# Different Next time?

- finalize design before beginning fabrication
- Bigger Servos