Aqua Guardian Build Timeline

Sensor Modelling

1. CAD sensors (very rough, just need dimensions+shape)
2. CAD microcontrollers (same thing here)

Hull Design

1. Model various hull shapes
    1. Print
    2. Test
    3. Find most effective
2. Begin Modelling hull design
3. Water seal hull (epoxy)
4. Test seals over-night

Electronic Integration

1. Begin building and inserting sensors+microcontrollers into the hull
2. Install solar panels to outside of the buoy
3. Rough connect testing (connect sensors and ensure data collection and cellular data transmission)
4. Water seal wires and electronics components (battery, antenna, microcontrollers, etc)

3-Day Test #1

1. Prior to commencing full test, we must manually measure each variable of the water we will test.
2. Commence test, and ensure data upload
3. Compare independent tests with live data uploads, and verify sensor calibration within margin of error.
4. If everything works, advance to next step.

7-Day Test #2

1. Commence test on water body
2. Verify data uploads
3. By the end of the test, collect data

AI Integration/Training

1. Use autogenerated XLSX file of data to commence AI training model
2. Research safe and dangerous output values
3. Find danger thresholds
4. Figure out how to automate data analyzation every upload

5. Integrate into webpage data calculations.

Website Design

1. Design an account system
2. Make a module for managing devices, and connecting to buoys
3. Touch up and make data display aestheticly pleasing and easy to navigate.