Milestone One: 2 Wheel Cart Project – Cadyn Maddocks and Joshua Mularczyk

Software:

For the project we will be using C++ using Visual Studio. If that doesn’t work well, we can still switch to using the Arduino IDE as an alternative. We will also be using 6302view.

Bring up Plan for 6302view software:

Download the repository. Copy the 6302view folder into the Arduino libraries folder. Install the dependencies. Then create a test following an example from the GitHub page.

Bring up Plan:

We will be doing the hard coding for the project using C++ in Visual Studio because of its error checking and ease of use. If we need to use Arduino IDE to load the code onto the ESP32 we will, otherwise we will try to do so using Visual Studio. We will be using 6302view in order to see the response of inputs to help debug our control system. The first test we need to overcome is to figure out what inputs gives a specific torque to the wheels. From there we can test the initial design of our control loop and see if it can stand up straight. The next step after getting the control loop working is to add an input that causes the cart to move forward without falling over. From there if we have time getting the cart to turn as well would be ideal.

Current Progress:

We’ve gotten things downloaded, but we need the esp32 to actually run any tests. Feedback on the bring up plan would be helpful.