Technical discoveries:

1. The accelerometer is very noisy and not calibrated to exact 0.
2. The accelerometer direction is X for forward/backwards movement.
3. The Gyro direction is Y for rotation about the “axle”

To do/Questions:

1. Can the ATMega328 sustain 100Hz refresh rate?
   1. Currently with reading accel X, gyro Y, 10 sample low pass filter on accel, outputting raw data, takes 2 – 4 ms per loop.
2. Outputs real-time raw and filtered accel and gyro data for logging.
3. Implement complementary/kalman filter.
4. Implement motor drive control.
5. Implement PID algorithm.