Orientation Sensor

General Description

The orientation sensor provides the robot with data about the toll, pitch, and yaw of the robot.

Equipment, Parts, Software Used

LSM6DSOX + LIS3MDL (Accelerometer, Gyroscope)	Link to the part purchased [Adafruit LSM6DSOX + LIS3MDL](#)

Logic, General Notes, Reasonings

This sensor module was chosen because it is a 9 DOF sensor in a small package. The sensor gives temperature, gyroscope, magnetization, and orientation data. The sensor is also ran off of I2C, so it coincides with the plug-and-play idea adaptability of the robot. To connect the sensor to the I2C bus, a Grove to Quiic wire is used.

Calibration

To calibrate the robot, follow the methodology from [Calibration](#). To upload the saved calibration data from the MotionCal software.