

This script is for the control of a camera stabilization gimbal. The device is comprised of three MG-996R Servo Motors, an MPU 6050 Accelerometer/Gyroscope, and an Arduino Nano controller board. The script uses I2C protocol to communicate with the MPU 6050 in order to get the real time position of the camera. This data is used to inform the motion of the three servo motors. Each motor compensates for motion corresponding to one rotational degree of freedom (pitch, roll, and yaw). Controlling each of these allows the device to maintain a stable platform on which to mount a camera, and therefore allowing the camera to record stable footage.