**CPE 301 Final Project**

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**Arduino MEGA Based Drone**

**Overview:**

The design of this drone was based upon the topics covered in CPE301. The drone was based upon the F450 Base which is a common base for DIY drones. Standard drone motors and ESC’s were used in conjunction with the Arduino and were controlled using pulse width modulation. The drone has a gyroscopic sensor, along with an APC220 wireless transmitter that sends the gyroscopic data to a computer to be used at a later date. System constraints are shown below in Table 1.

Table 1: System Constraints

|  |  |  |
| --- | --- | --- |
| Device | Operating Voltage | Operating Current |
| Motors | 12V | 1.3A |
| ESC’s | 12V | 3A |
| Gyroscope | 5V | 3.6mA |
| APC220 Transmitter | 5V | 42mA |

**Pictures of the Drone:**

**Video of Operation:**

**GitHub Link:**

<https://github.com/rpriz/droneCPE301UNR>