**CprE 388: Final Project Proposal**

**List Group Members:**

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**Application Name:**

RC Quadcopter Interface

**150 Point Rubric:**

*Assign points to major features and functionality (must total 150)*

Requirements:

(40) Working Android Application

(20) Preferences implemented

(20) Two or more methods for controlling flight (Touch interface and accelerometer at a minimum – touch will still control thrust)

(40) Completed Arduino code

(30) Communication with the quadcopter

Optional:

Pre-program flight patterns for the quadcopter

**3 Week Schedule:**

*A schedule of incremental events leading to a finished goal*

Week 1:

* Get Android application built with an interactive user interface and general layout
* Research the Syma X11 and RC transmitters and receivers
  + Take apart Syma X11 controller
  + Figure out how to send PWMs via the RC transmitter with Arduino Mega ADK

Week 2:

* Start writing the Arduino code
* Test the output of the Android application’s accelerometer data and virtual joystick values
* Figure out best way to send packets of information to Arduino
* Get a successful connection from Android 🡪 Arduino 🡪 RC Transmitter 🡪 Quadcopter
* Hopefully get a thrust signal recognized by the quadcopter

Week 3:

* Finish Android application
* Test and tweak the Arduino code for optimal interaction with the quadcopter