Requirements

## Functional Requirements

The purpose of this project is to create a GUI that can:

1. Control the drone’s movement.
   1. Control the velocity in each direction (X, Y, X)
   2. Safely take off
   3. Safely land
2. Collect data for the following fields:
   1. Time
   2. Velocity x/y/z
   3. Pitch
   4. Roll
   5. Yaw
   6. Altitude
3. Generate a CSV with the collected data.
4. Land the drone in event of an emergency or lost signal
5. Set limits on velocity and altitude.
   1. Drones will be flown indoors only at GGC, so this should help prevent crashes.

## Non-functional Requirements

The software must:

1. Have low latency
   1. Controlling the drone safely requires a quick response time between the iPad and the drone.
2. Be easy to use with minimal instruction
   1. Intuitive control scheme
   2. A “help” page with an overview of the controls (?)
3. Adhere to GGC campus safety guidelines

## Framework

For the Framework, we will most likely use:

1. Python (3 if we use QT, 2 if Kivy) for the backend
2. QT or Kivy (?) for the GUI
3. iOS
   1. Specifically, to run on an iPad