

User Stories

1. **As a user, I want to control the drone with my voice.**
 - 1.1. Create useful design artifacts in the process of creating an overall design
 - 1.1.1. Architectural Sketches
 - 1.1.2. User Stories
 - 1.1.3. Design Screen Mockups
 - 1.1.4. Look into offline Libraries
 - 1.2. Build the control station
 - 1.2.1. Setup the Raspberry Pi that we are going to use on the drone
 - 1.2.2. Write the Mavlink connection between the server and the drone
 - 1.2.3. Create a simple Flask server to receive incoming messages from the mobile app
 - 1.2.4. Write code to parse the messages into drone commands
 - 1.2.5. Write code to send commands to the drone
2. **As a user, I want to be able to interact with the system through my mobile phone so I can easily use the system on the go.**
 - 2.1. Create a React Native mobile app to provide a way for the user to interact with the system
 - 2.1.1. Initialize a basic React Native app
 - 2.1.2. Integrate the react-native-voice library so that it can recognize a voice command
 - 2.1.3. Write code that allows the user to record their voice and send then POST their message to a server
 - 2.1.4. Connect the React mobile app with the server on the Pi
 - 2.1.5. Figure out how to do voice to text processing offline
 - 2.1.6. Build a working version of the screen mockups
3. **As a user, I want to be able to define my own waypoints through text so I do not have to read out coordinates with my voice.**
 - 3.1. Add a feature to the app that allows the user to enter the waypoints through text
 - 3.2. Assign each waypoint a name that the user can use when saying voice commands.
 - 3.2.1. Example: If each waypoint is assigned a number, then the user could say "Go to waypoint 4."
 - 3.3. Make the app send the waypoints to the server
 - 3.4. Add functionality to the server that stores references to the waypoints
4. **As a user, I want to be able to tell the drone to X**
 - 4.1. Add functionality to the code running on the Raspberry Pi so that it can parse the incoming messages for X and then send commands to the drone to do X