Remote Controlled Drone

In this activity we aim to implement an RC drone using the DJI Tello, Python, and OpenCV.

**Requirements:**

* Display Drone Camera Feed
* Accept User Input (Mouse, keyboard, Both, your choice) to control Drone
* Be able to shutoff/abort drone using user input
* Implement four directions
* Implement Landing
* Implement Rotation

**Introduction**

When we’re tackling big projects, it’s important to break down the problem . First, we should consider what it is we want, and why we’re doing it. Sometimes we’ll find that a project is bigger than it needs to be, or that it won’t be that useful when we complete it, so we might change or adapt it.

What are some benefits of having an RC Drone? What can it help us do in the field?

**Project Planning**

Another thing that we should do is break our project into smaller project goals. We should identify the features we want to include and the requirements we have. Once we have those, we try to create small, easy to reach goals to accomplish the task. This helps us track whether or not we’re staying on track, and helps a project feel more manageable.

One way we can do this is to follow these steps:

1. Define the project – What are you doing? What is the end goal of your project?
2. What are your deliverables – These are the features your project will have, things that the code will actually do, or things the project actually needs. Completing one of these marks clear progress.
3. What resources/knowledge does each deliverable need – This means taking each item from step two, and deciding what you think you need to do it. What sensors will you use? What Python features will you need?
4. Prioritize Tasks – Look at what’s easiest and what’s hardest. What do you know how to do, and what do you need to learn? Come up with an order that makes sense to you.
5. Team Roles – If you’re working in a team, think about which team members are most fit for each task. Is the distribution of work equal? If not, how can you fix that?
6. Begin work – Jump in to doing your project.

Complete a project planning sheet to answer the planning questions.

**Activity**

[**https://github.com/arcaniussainey/DroneBlocks2\_Summer2024/blob/main/activities/RC%20Drone%20Guided.md**](https://github.com/arcaniussainey/DroneBlocks2_Summer2024/blob/main/activities/RC%20Drone%20Guided.md)