Progress Presentation-I

e-Yantra Summer Internship-2018

<**Multiple Drone Control**>

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Overview of Project

- Project Name:Multiple Drone Control
- Objective:To control more than one drone by a single master.
- Deliverables:Video tutorials(along with scripts) explaining each module.

Overview of Task

1. Understanding the current pluto drone ROS package
2. Updating single master multiple client node to receive data from the drones
3. Exploring drone-drone communication
4. Position hold of both drones
5. Coordinated waypoint navigation using Whycon
6. Documentation

Task Accomplished

- Updated single master multiple client node to receive data from the drones.
- Each drone in the network acts as Station and is connected to a single Access point.
- Commands are sent by defining unique topic names for each drones.
- Seperating each drone under camera using whycon:- Seperating each drone identity under camera using same type whycon marker.

Challenges Faced

- Communicating with multiple drones with socket programming and ROS.
- Importing more than one Ardrone model with unique topics in Gazebo.
- Seperating the drone identities in whycon markers.
- Stabilizing the yaw of the drones due to magnetometer error.

Future Plans

- Simulation on Gazebo showing coordinated motion of more than one drone .
- Efficient communication between drones and access point taking into consideration the latency due to internal and external factors.
- Coordinated motion of more than one drone along a specific path.

Thank You

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THANK YOU !!!