



**FINAL YEAR PROJECT REPORT**

# **EASY GUI FOR MONITORING AND CONTROLLING UAV**

**In fulfillment of the requirement  
for degree of  
BS (Computer Sciences)**

**By**

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## ABSTRACT

Embedded hardware/software architecture specially designed to be applied on unmanned aerial vehicles (UAV). Many types of UAVs exist today, however with the advent of UAV's civil applications, the class of UAVs is emerging as a valid option in a commercial scenario. This type of UAV shares limitations with most computer embedded systems: limited space, limited power resources, increasing computation requirements, complexity of the applications, time to market requirements, etc. so we use high power desktop computers to controlling all these limitation.

We in this project allows the operator to monitor the autopilot, change waypoints, change flight plans as per requirement. Allows both the UAV developer and the end-user to access critical information in real-time. Up to defined sensors can be configured and displayed in three formats:

- Current Sensor values are displayed in an easy to read gauge format. Warning and danger levels indications.
- The graphs sensor specific variations over time.
- The Trace Route displays sensor data variations along the UAV's flight path.

Most and 2<sup>nd</sup> thing is specifically designed for ease of user Point and click waypoint editor / mission planner.

- Mission simulation for testing and training purposes.
- User definable units (like km, meters etc).
- Special mode overrides navigation for more flexible or change the plane in easy way.
- User friendly layout. Large map area.
- Extensive online help and tool tips as per requirement.

So finally remove traditional UAV navigates and controlled on a signals send by Ground Control Station (GCS) by replacing our software it once direct the path to the UAV. UAV do surveillance on a selected area and return to the base after completing the route provided. Meanwhile during the operation time UAV continuously send sensor information and monitor by the operator in GCS room. Sensor information decoded and shown to the controller. Map also

Plot on a runtime by the information provided by a GPS. Camera snapshot send by a UAV also be displayed by software in real time. So by this way we minimize the pilot effort for navigating the UAV and minimize the conventional telecommunication system.

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