



**Bahria University**  
Discovering Knowledge

## **FINAL YEAR PROJECT REPORT**

### **UTILITY UNMANNED AIRCRAFT SYSTEM**

In fulfillment of the requirement for degree of  
**Bachelor's in computer engineering (BCE)**

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This report is submitted as required for the Project in accordance with the rules laid down by the Bahria University as part of the requirements for the award of the degree of Bachelor of Engineering. I/We declare that the work presented in this report is my/our own except where due reference or acknowledgement is given to the work of others.

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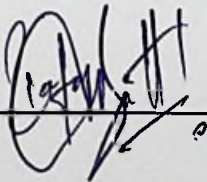
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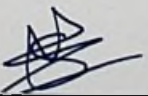
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## **Abstract**

Natural disasters due to global climatic change and increase in terrorism are leading to valuable life lost. Often, this loss of life takes place due to inability of provision of aid to trapped humans or surveillance flaws. To deliver different things on the doorsteps of people using Unmanned Aerial Vehicle is on the rise and is being tested in different places. There are a lot of issues that can be solved if we can achieve autonomous drones; the purpose of our project is to make an autonomous Hexacopter to which we will give a mission in the form of waypoints, and it will follow that mission and in the end land at the desired location. Autonomous, stable, and sustainable flight, using PID tuning, if equipped with image processing on Aerial bursts will provide vast usage for several practical applications ranging from emergency handling to surveillance and inspection. This project is all about modifying a Hexacopter in such a way that it can fly autonomously using the waypoints that are fed into its controller using ground control station. Waypoints can also be given to the flight controller using telemetry. The flight controller in Hexacopter controls the motor and direct it to the right location.

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