TEAM ANVESHAK

AUTONOMOUS SURVEILLANCE PLANE

MOTIVATION

Drones are mostly used in surveillance using GPS which is a satellite-based navigation system. But due to some natural disaster if network is not available, we can't use GPS...then we need something that doesn't need any command, it just goes to a desired place , does it job (takes pictures or drops food packets) and comes back. A quad copter is not efficient due to low endurance. We need something efficient...

OBJECTIVE

To design and make an AUTONOMOUS SURVEILLANCE PLANE using IMU (instead of GPS) to locate a certain position of interest with minimum error.

COMPONENTS AND ESTIMATED COST

Note: The prices may vary

Electrical components

Servo motors : 1000

Brushless motor : 1500

Li Po battery : 900

ESC (Electronic Speed Controller) : 600

Arduino Uno : 1500

IMU (inertial measurement unit) : 3000

Camera: 1800

Estimated cost: the total manufacturing cost will be less than 10000

BRIEF IMPLEMENTATION STEPS

1. MANUFACTURING AND TESTING RC PLANE
2. MAKING IT AUTOMATED AND TESTING ITS PERFORMANCE
3. TRYING TO MINIMISE THE ERROR IN LOCATING THE POSITION
4. TESTING OF THE SPECIFIED OBJECTIVE

WHAT WE EXPECT TO LEARN

Understanding the basics of flight, applications of IMU (inertial measurement unit) and using different sensors.

Extensive coding with Arduino.

> TEAM MEMBERS <

SARVJEET KUMAR	150010034
JAIDEEP KUMAR	150010043
SAURABH ANAND	150010035
ABHINAY MHATRE	150110038