

## **Designing of Drone for capturing of VJIT and analysing its live video using Deep learning frame work**

### **Objective:**

The aim of the project is to live stream, collecting images, and **classification of live data** using YOLO V5(Deep Learning Technique).

### **Abstract:**

Drone (Unmanned Aerial Vehicle) is an electronic device which is remote controlled based aircraft used to achieve vertical flight with stability and it can be used for capturing **live Video** and also for capturing **images** using **camera**.

The basic drone includes a frame, flight control board, motors, electronic speed controllers, a transmitter, a receiver, Lipo battery and camera interfaced with the kit. Individual components were tested and verified. Tuning and calibration of the PID controller were done to obtain stabilization on each axis. Currently, the drone can properly stabilize itself.

The data captured by drone is now classified by using Deep Learning YOLO V5 framework. This works by analysing the data into different categories such as vehicles (2 wheelers and 4 wheelers), pedestrians(Humans) and provides the count of each category.

### **Outcome:**

The drone provides a rare view of the campus to get complete information in and out with an analysis report. As drone is a movable aerial vehicle with integrated camera, can reach blind spots easily and can improve surveillance.

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