

# **Video Based Surveillance System**

## **Group Members:**

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## **Preliminary Design:**

This project deals with Video based surveillance in which we will be including the following features:

### **1. Identification and Labelling of target**

- Inputs from Camera will go to a Deep Learning model
- Deep Learning model will draw bounding box and label the target

### **2. Locating**

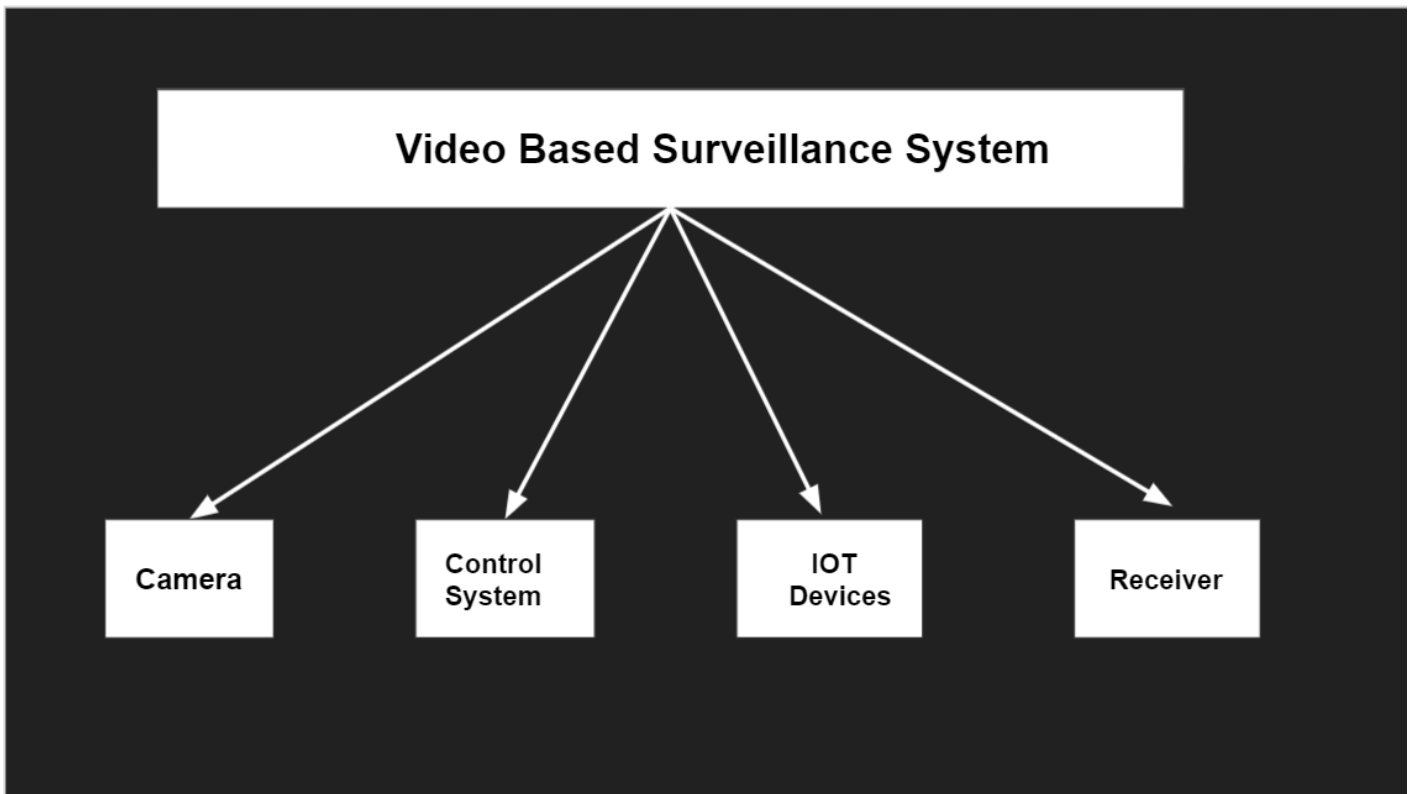
- Based on the bounding box, Location coordinates will be generated
- Based on the generated coordinates, different distance labels will be assigned

### **3. Locking and Tracking**

- Assigning Region of Interest for the Deep Learning model
- Generation of signal for the control system to move the camera as per the target

### **4. Prediction on the basis of target**

- The primary focus of this project is to detect and predict Human motion.
- There are four steps of prediction:
  - 1. Prediction of Human bounding box**
  - 2. Prediction of Face bounding Box**
  - 3. Prediction of Face in the bounding box as per the images stored in database.**
  - 4. Prediction of further movement and direction of the locked target**



### **List of Items Required:**

1. Camera
2. Camera mount
3. Motor
4. Raspberry pi 4
5. Arduino (Control system)
6. Wires

### **List of Items for Testing:**

1. Images of different peoples

### **Unprecedented Budget:**

1. Camera – 5000/-
2. Motor – 500/-
3. Raspberry pi 4 – 7000/-
4. Arduino – 2000/-
5. Miscellaneous – 500/-

**Total – RS 15000/-**