**AI BASED SMART HOME SURVEILLANCE SYSTEM**

**Aim:**

Aim of this project is to build a surveillance system for home to identify the presence of human and notify to the owner of house.

**Abstract:**

Internet of Things (IoT) is an emerging technology which is making our world smarter. The development of the IoT network with its related technologies has upgraded home and lifestyle. Moreover, in most of the cases, the problem in securing home depends on the physical presence of a human in the home. This project gives the design of Home Security Surveillance System using Raspberry Pi.

In this project we have raspberry pi, a tiny micro controller which is able to run machine learning algorithms. Along with raspberry pi we have attached the USB camera to capture the scenario. From the input frame we can detect the presence of the human using Haar cascade algorithm. When the person detected within the frame the system will send the notification to house owner through cloud.

**Block diagram:**

Raspberry Pi

USB Camera

Power supply Unit

WiFi

Cloud

**Block diagram description:**

In above block diagram, we are attached USB camera with raspberry pi through USB port. Fixed 5V power supply and WiFi connectivity is provided to raspberry pi.

**Requirements:**

**Hardware Requirements:**

* USB camera
* Raspberry pi

**Software Requirements:**

* Python language
* Python IDLE