**Smart home Camera**

**Aim:** Developing a server and user interface for a smart-home application using camera sensors to perform facial recognition to identify users. When a user is recognised, switches are turned on or off using the switches API depending on the user input preference.

**Requirements:**

* Raspberry pi with installed camera
* Open CV, python 3, SQLite database, raspberry cam precompiled on the Raspberry pi.

**Functionality:**

The user who installs the Smart home Camera system has to input the different user names and the switches being assigned to the user onto the database. The camera captures the image of the user and then matches it with the training set of data which is on the database to check if the user is been recognised. Each time the user is detected and recognised the webpage allows the user to set or change the preferences of the switches been assigned to him. Changing the preferences of the switches means assigning different states to the switches. We have set three different states such as turn the switch on, off or do nothing which keeps the switch state to the previous assigned state.

In general, when the user comes in front of the smart home camera, the camera captures the image of the user and then matches it with the database. When the user is recognised the switches are turned on or off depending on the preferences assigned. The webpage could be also used in mobile or tablet version.