**IMPLEMENTATION:**

**MODULES:**

* User
* Admin
* Deep Learning
* **RCNN**

**MODULES DESCRIPTION:**

**User:**

The User can register the first. While registering he required a valid user email and mobile for further communications. Once the user register then admin can activate the user. Once admin activated the user then user can login into our system. User can upload the dataset based on our dataset column matched. For algorithm execution data must be in float format. Here we took different guns related images dataset. User can also add the new data for existing dataset based on our Django application. User can click the training in the web page so that the data calculated model results and model loss , accuracy based on the algorithms. User can display the training results and surveillance camera display live results. After that user can logout.

**Admin:**

Admin can login with his login details. Admin can activate the registered users. Once he activate then only the user can login into our system. Admin can view the overall data in the browser. Admin can click the model Results in the web page so calculated Accuracy , model loss based on the algorithms. All algorithms execution complete then admin can see the overall accuracy in web page. After that admin can logout.

**Deep learning(cnn)**

the methodology of weapons detection using deep learning. Frames are extracted from the input video. Frame differencing algorithm is applied and bounding box created before the detection of object .

weapon detection using a convolution neural network (CNN) based SS D and Faster RCNN algorithms. Proposed implementation uses two types of datasets. One dataset, which had pre-labelled images and the other one is a set of images, which were labelled manually. Results are tabulated, both algorithms achieve good accuracy, but their application in real situations can be based on the trade-off between speed and accuracy

**RCNN( Region Convolutional Neural Network):**

Dataset is created, trained and fed to object detection algorithm. Based on application suitable detection algorithm (SSD or fast RCNN) chosen for gun detection. The approach addresses a problem of detection using various machine learning models like Region Convolutional Neural Network (RCNN), Single Shot Detection (SSD)