

## Computer Vision and Deep Learning Projects

### 1 .Selective Search Object Detection App

**Libraries & dependencies:** opencv-python, opencv-contrib-python, sklearn, Tensorflow, numpy, cx\_freeze, yolov4 model.

**Neural Network:** Deep Neural Network.

**Tools :** Pycharm IDE.

I have been used the pre- trained algorithms for object detection. I create few custom buttons to select single object or multiple object, which is available in the cam vision. The Final product is an Executable file. That can detect selective images the object in real-time cam.

Git Link : <https://github.com/seankay963/Selective-Object-Detection-App>

### 2. Deep Facial Recognition App

**Libraries & dependencies:** opencv-python, matplotlib, sklearn, numpy, Keras, Tensorflow. LFW dataset,

**Neural Network:** Siamese Neural Network.

**Tools :** Jupyter Notebook.

I have been used Siamese neural network. LFW data set for negative data, I took my own 1600+ images with unique name for positive and anchor. I used Kivy framework to create as an application. The shown face is matching (more than our threshold limit) with our data; it shows 'verified' otherwise 'Unverified'.

Git Link: <https://github.com/seankay963/Facial-Recognition---SNN/blob/main/Fac%20Rcg%20APP.ipynb>

### 3. Real Time Number Plate Detection and OCR

**Libraries & dependencies:** opencv-python, EasyOCR, ipykernel, Tensorflow, numpy, matplotlib

**Neural Network:** Siamese Neural Network.

**Tools :** Jupyter Notebook.

I used pre-trained Tensorflow object Detection model to detect the number plate on Kaggle dataset, EasyOCR to get the text. Size filtering algorithm to detect largest text of the image and save the text in to excel file.

Git Link: <https://github.com/seankay963/Number-Plate-Deduction--OCR-/blob/main/train%20and%20detect%20images.ipynb>

### 4. Project about Skin disease & Skin Cancer classification:

I am looking for recent time images from Cancer Institutes.