Fingerprint and Iris Recognition with CNN

1.SYSTEM REQUIREMENT SPECIFICATION

Hardware Requirements

- **System Processor** : i5/i7.
- **Hard Disk** : 1 TB.
- **Ram** : 8 GB/12GB.

 Any desktop / Laptop system with above configuration or higher level.

Software Requirements:

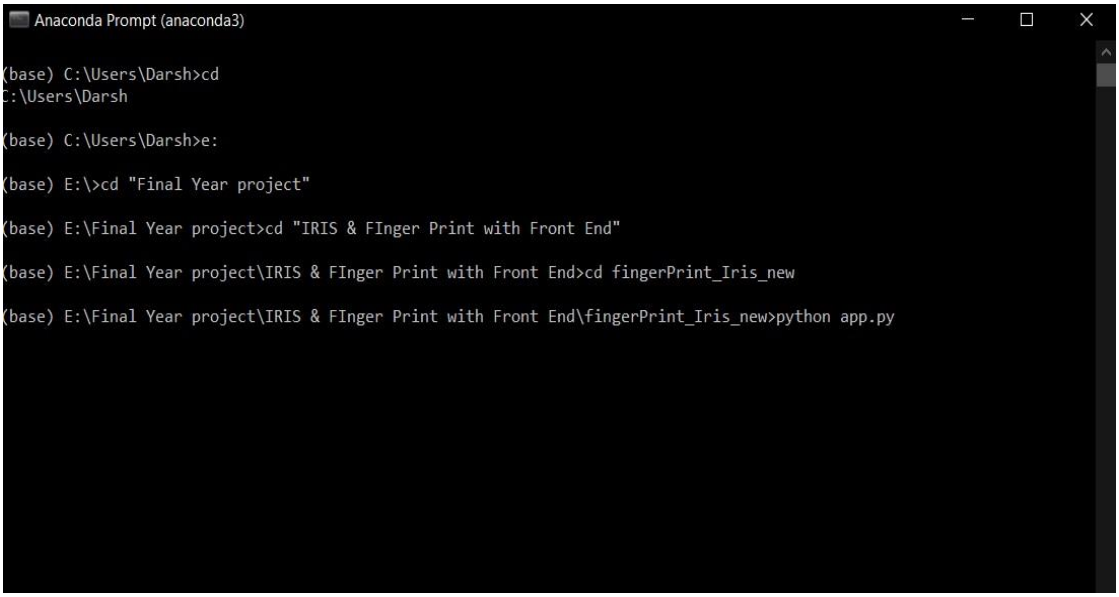
- **Operating system** : Windows 8 / 10
- **Programming Language** : Python 3
- **Environment** : Anaconda Framework
- **IDE** : Jupyter Notebook
- **Libraries** : Keras, TensorFlow

2. REQUIREMENT Libraries and Modules

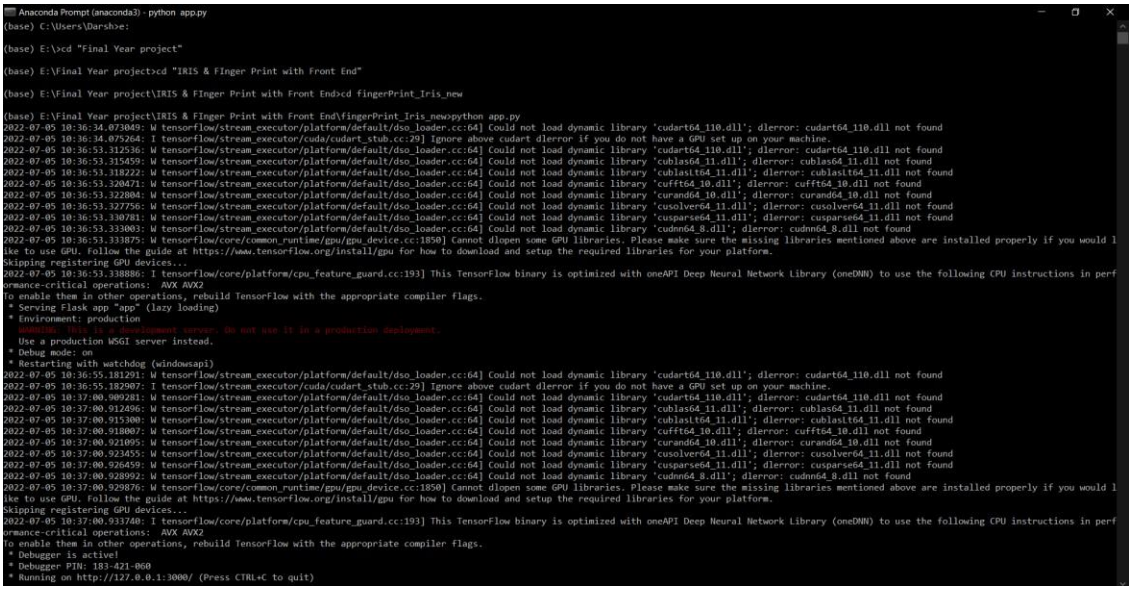
- import warnings warnings.filterwarnings("ignore")
- import numpy as np
- import cv2
- import matplotlib.pyplot as plt
- %matplotlib inline
- import keras
- from tensorflow.keras import layers
- from tensorflow.keras.models import Model
- from tensorflow.keras.utils import Sequence
- from sklearn.utils import shuffle
- from sklearn.model_selection import train_test_split
- from imgaug import augmenters as iaa
- import random

3.Steps to Run our Fingerprint And Iris Recognition With CNN Approach Project

i. Open the anaconda navigator and Set the path where your project is and run your program

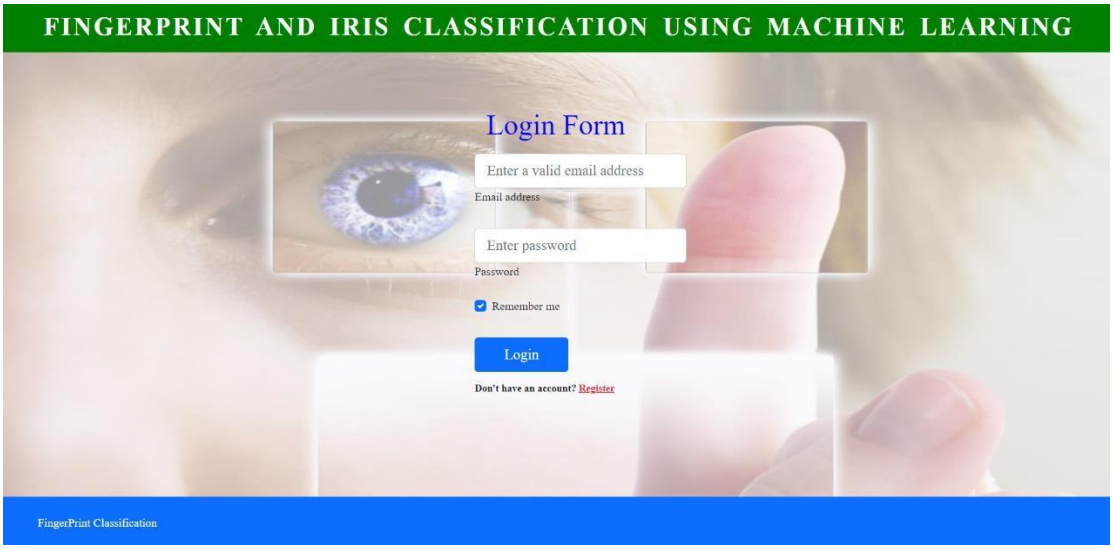


Program is running successfully



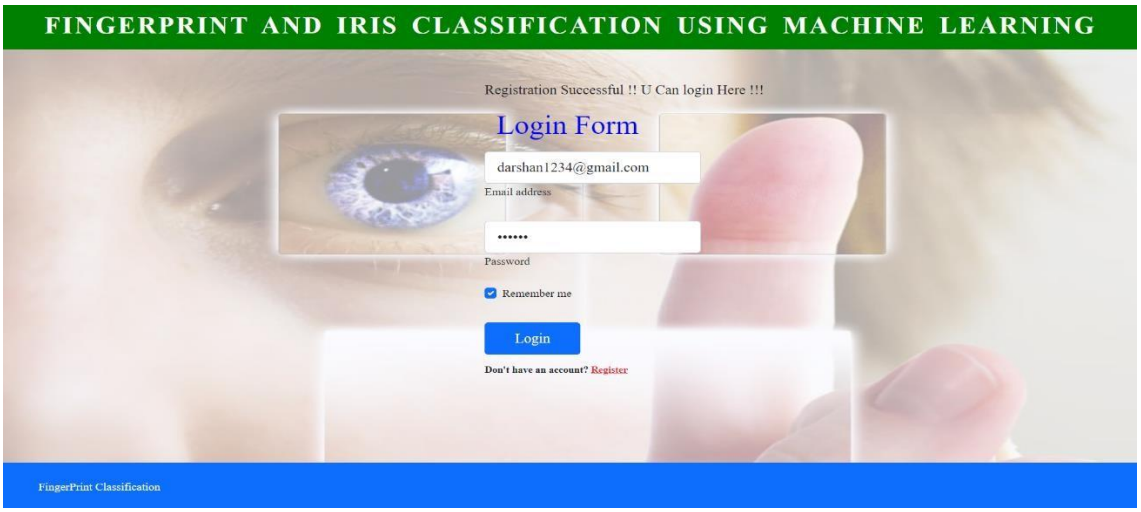
ii. Now open any browser and type the localhost id as of now we have given http://localhost:3000

iii. After clicking on enter project Home page appears

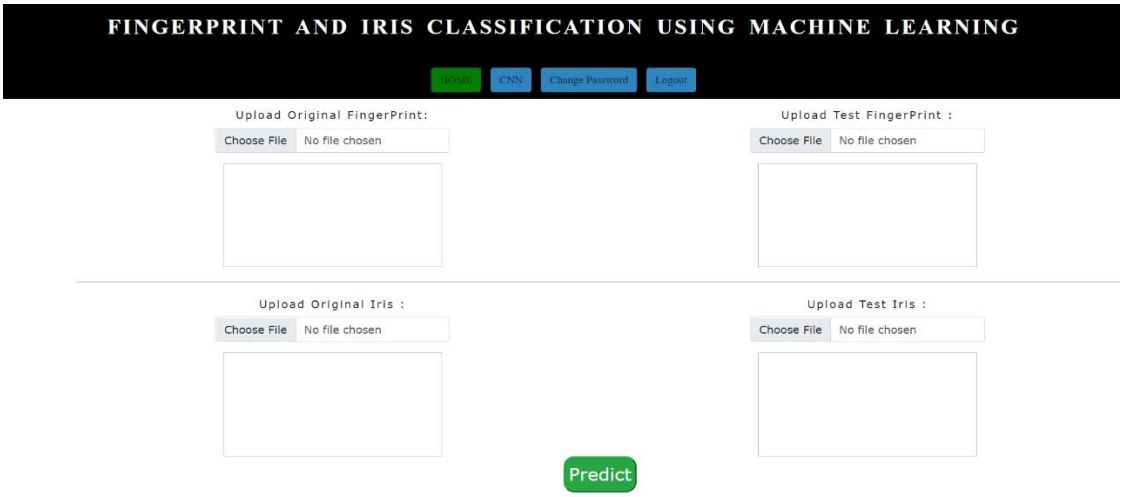


IV. Now if you are already an user you can login or you need to register

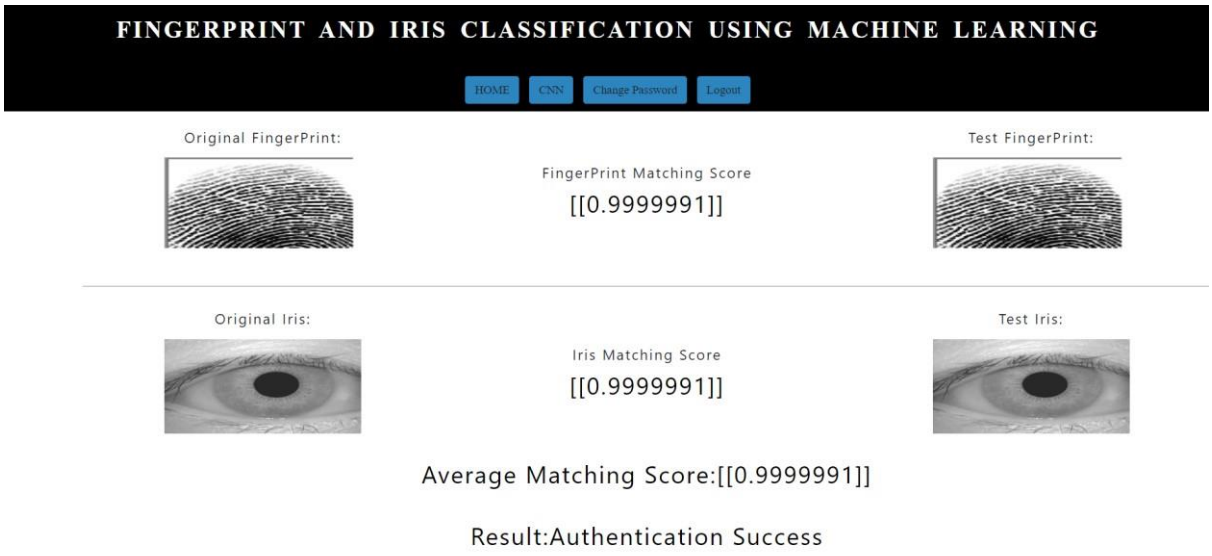
V. Once the registration is done successfully you can login



VI. After Logging in the home page will be displayed to the user

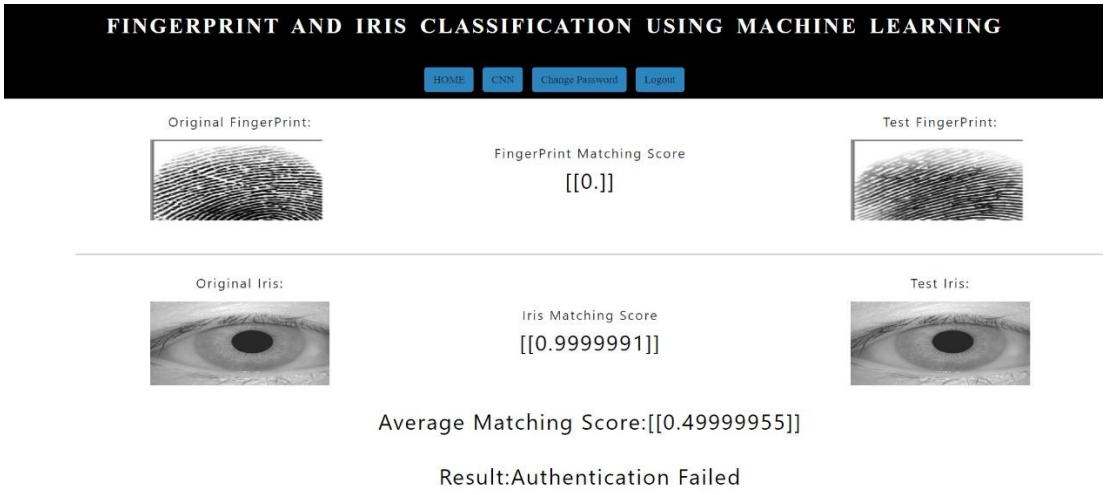


VII. Now you can test the Iris and fingerprint of the suspect with the data you are having

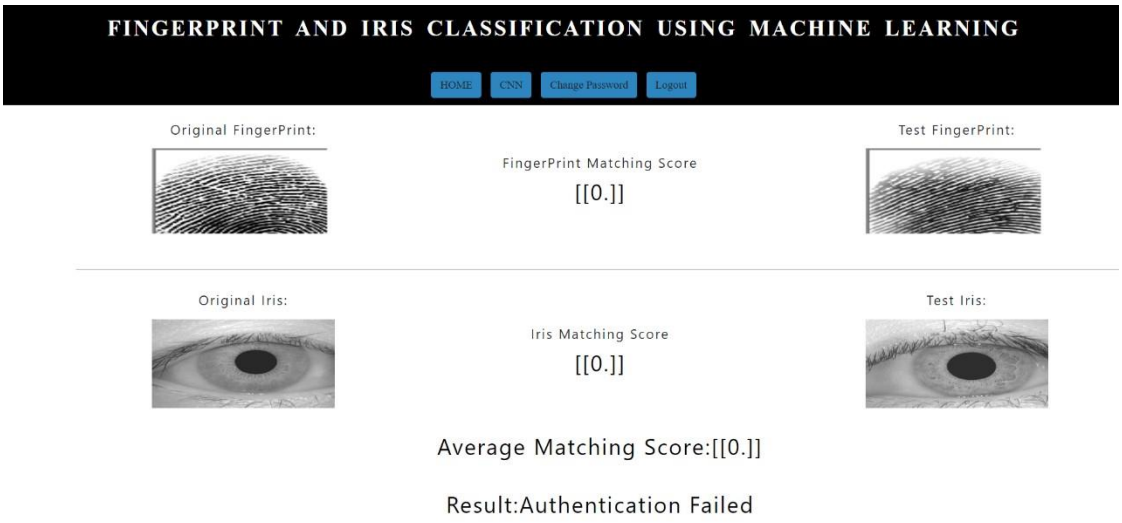


From the above picture, you can see both iris and fingerprint is matching Hence the Average Matching score is 99% and Authentication is Success

Another test case with a different fingerprint and same iris

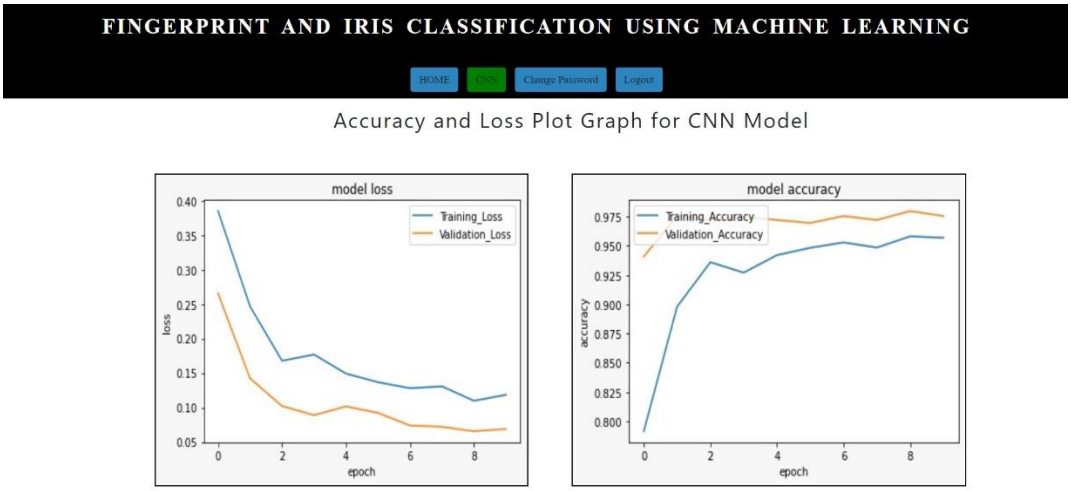


Another test case with a different fingerprint and different iris

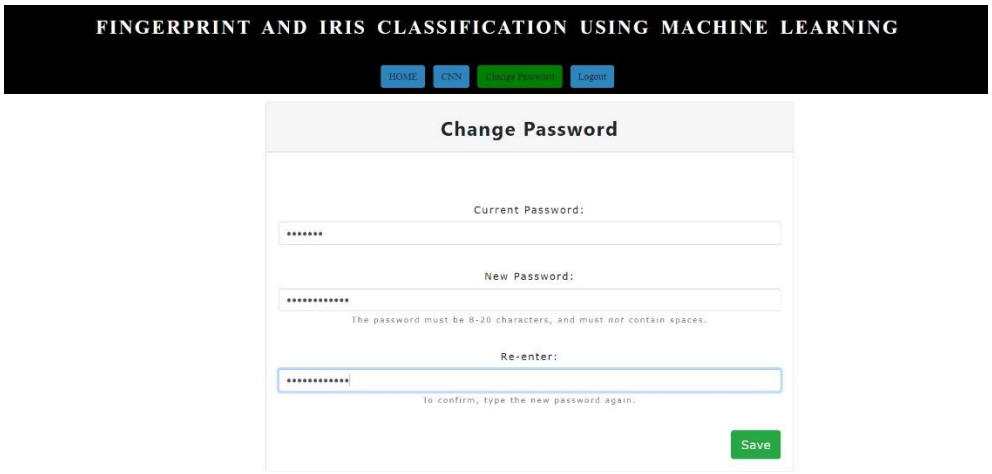


As you can see in both images that is fingerprint and iris matching score is 0%

VIII. Accuracy and Loss Plot Graph for CNN Model as Shown Below



IX. You can also change the Password as Shown Below



X. For storing and retrieving User credentials we will be using Excel sheet as shown Below