SKILLCONNECT
Innovating Engineering!

Week 4: Advanced Challenge (Week 3 continued)

Agenda: Face Recognition using One-Shot learning technique and Siamese Network.

Topics Covered: Face recognition using One shot learning, Siamese network and Triplet Loss, Flask server and UI (web), Deployment on Heroku.

Problem Statement

Develop a face recognition app that can accurately identify and provide authentication with very less number of images for training. The application should work in two phases:

1. Registration Phase: User inputs certain details and his/her live pictures are taken from the camera.
2. Authentication Phase: Whenever a user tries to access the application, a picture is scanned and verified from the existing DB.

Develop a Flask Server and UI for Registering new faces and for Face Recognition. Deploy the server on Heroku (free cloud hosting).

Results:

The github repository should contain following list of files

1. Trained models
2. Google Colab or Python Code used for developing and training the model
3. Python Code that can be used for testing the model.
4. Flask server
5. UI for uploading sample Images or taking images from the webcam.
6. Well documented README file.
7. Link to hosted Heroku Server.

Resource References

1. C4W4L02 One Shot Learning for Face Recognition- by Andrew Ng
2. C4W4L03 Siamese Network
3. For flask server and UI pages: https://github.com/shubham99bisht/Intrusion-Detection-using-ML