Real Time Face Recognition

Project Overview:

To Create a Realtime Face Recognition Service using IOT through IBM Cloud.

# Standards:

* OpenCV
* IBM Cloud
* Node-Red
* MIT App Inventor

# Objectives:

* Installing OpenCV.
* Creating IBM Cloud Services.
* Getting Service Credentials From IBM.
* Creating Node-Red Flow.
* Creating MIT-App.
* Establishing Communication Between These Services.

# Requirements/Task(s):

Task 1 – Writing a Python Code

Task 2 – Importing Required Libraries Along with OpenCV.

Task 3 - Provide a set of images to the python code to utilize them as known faces.

Task 4 – Providing Services Credentials to Code.

Task 5 – Connecting to IBM Cloud with Providing Services Credentials.

Task 6 – Detect Faces from Each Frame.

Task 7 – Continuously Publish Detected Faces to the IBM Cloud.

Task 8 – Create a Node-Red Flow.

Task 9 – Create a Dash Board Through Node-Red.

Task 10 – Publish Detected Faces into URL Through Node-Red.

Task 11 – Create an MIT-App.

Task 12 – Continuously Retrieve Detected Faces into the MIT-App through the URL.

Task 13 – Display Corresponding Images for the Retrieved Face.

# Description:

A **REAL TIME FACE RECOGNITION** system is capable of identifying or verifying a person from a video frame. To recognize the **face** in a frame, first you need to detect whether the **face** is present in the frame. If it is present, mark it as a Region of Interest (ROI), extract the ROI and process it for **facial recognition**.

# Summarize what you learned:

We Learnt OpenCV Implementation, Working of IBM Cloud, Using Node-Red Flow, Creating Apps Using MIT-App Inventor. Among the things we have learnt Node-Red was the easiest to Work with. Publishing Data through code and retrieving it was little challenging. Next time we aim for Real Time Object Recognition through IBM Watson.

# Link to Our Project:

<https://github.com/rohit-chakradhara/Internet-of-Things-IoT-with-IBM-Cloud/>

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