

Project Development Phase

Sprint – 4

Date	19-11-2022
Team ID	PNT2022TMID30648
Project Title	Real-Time Communication System Powered by AI for Specially Abled

Interfacing all the component to flask app :

1. Main Flask app:

a. Create a flask app.

i. `from flask import Flask ,render_template,Response,jsonify`

b. Imported the prediction program to flask app.

i. `import opencv`

c. Imported train list to the flask app.

i. `import trainlist`

d. Adding required functions to render the templates.

```
@app.route("/label") #for label
def label_text():
    index=opencv.get_frame()[1]
    dataset=trainlist.dataset
    dataset.append(["-"])
    label=dataset[index]
    return jsonify(label)

@app.route("/home") #for home page
def index():
    opencv.cap.release()
    return render_template('index.html')

@app.route("/translate") #for translation
def translate():
    opencv.cap=opencv.cv.VideoCapture(0)
    txt=label_text()
    return render_template('video_out.html',txt=txt.json)

def gen_vid(): # Video Stream
    global video_camera
    global global_frame
    while True:
        frame =opencv.get_frame()[0]

        if frame != None:
            global_frame = frame
            yield (b'--frame\r\n'
                   b'Content-Type: image/jpeg\r\n\r\n' + frame + b'\r\n\r\n')
        else:
            yield (b'--frame\r\n'
                   b'Content-Type: image/jpeg\r\n\r\n' + global_frame + b'\r\n\r\n')

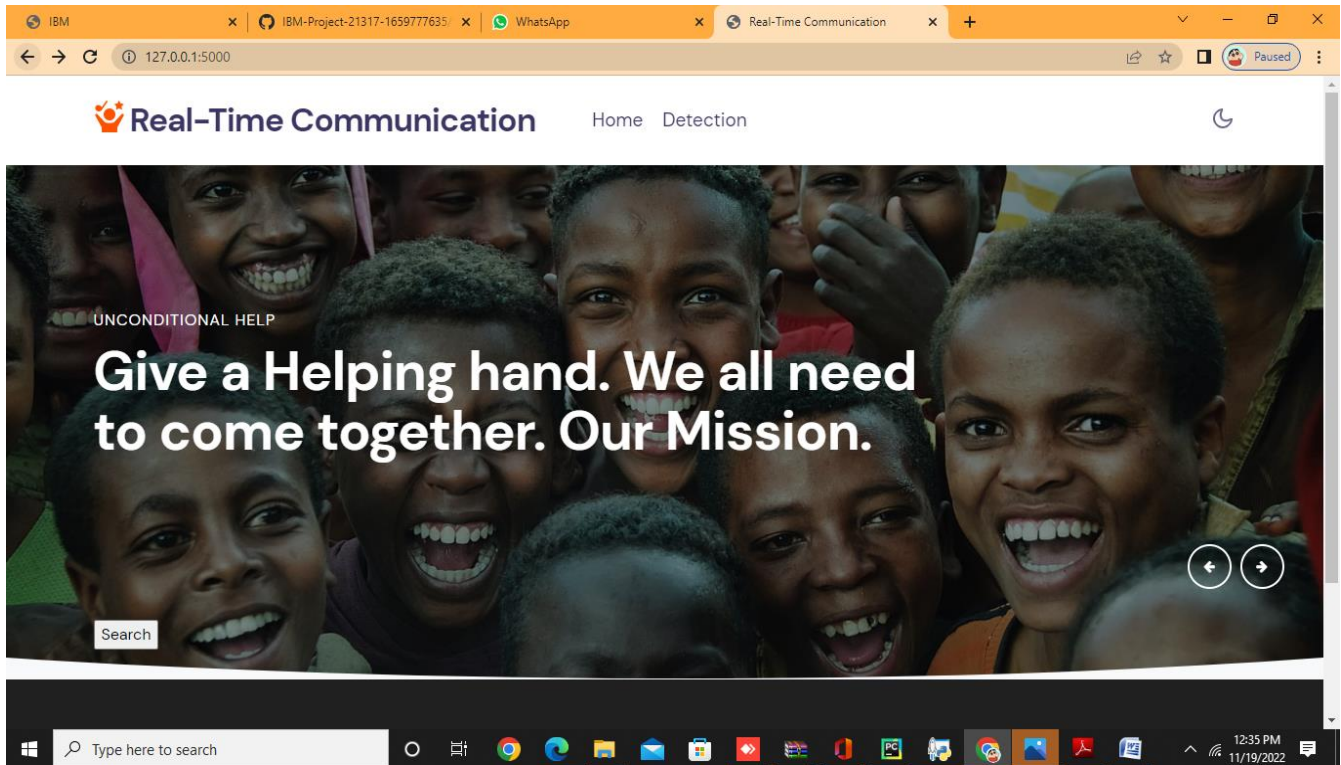
@app.route("/video") # Video page
def video():
    return Response(gen_vid(),
                    mimetype='multipart/x-mixed-replace; boundary=frame')
```

e. Run the app.py (Flask App).

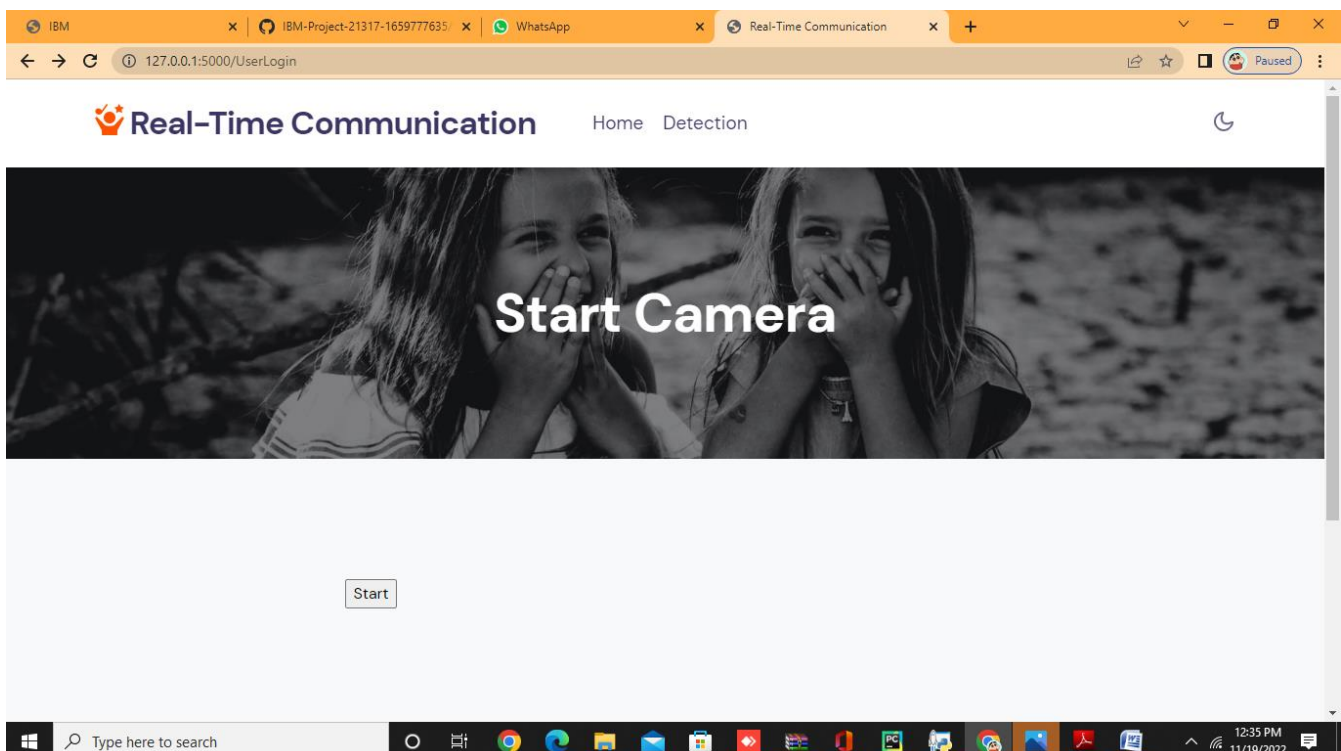
```
(Project) PS C:\Users\mythili\ Documents\PROGRAMMING\Project> &  
c:/Users/mythili/Documents/PROGRAMMING/Project/Scripts/python.exe  
c:/Users/mythili/Documents/PROGRAMMING/Project/app.py
```

OUTPUT :

Main Page :



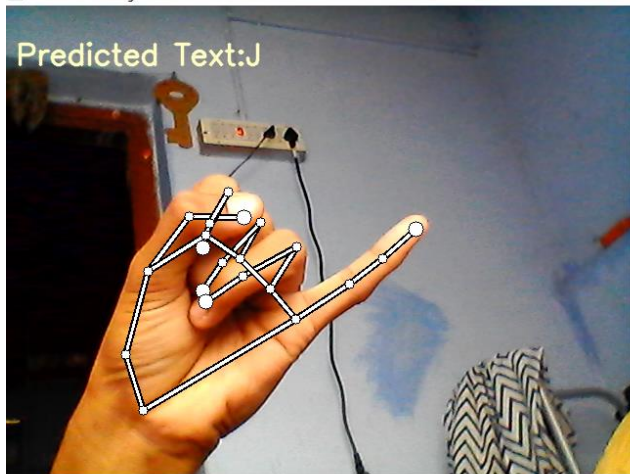
Choice Page :



Video translate Page (for Normal persons to understand Specially abled person) :

Hand Gesture Recognition

Predicted Text:J



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8:22 AM
11/19/2022

