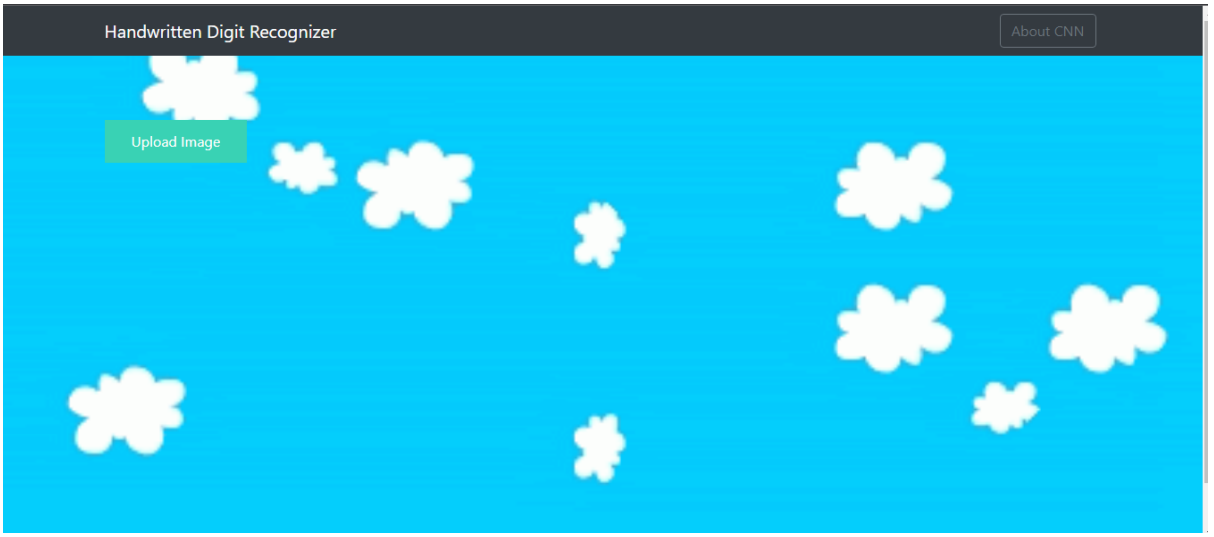
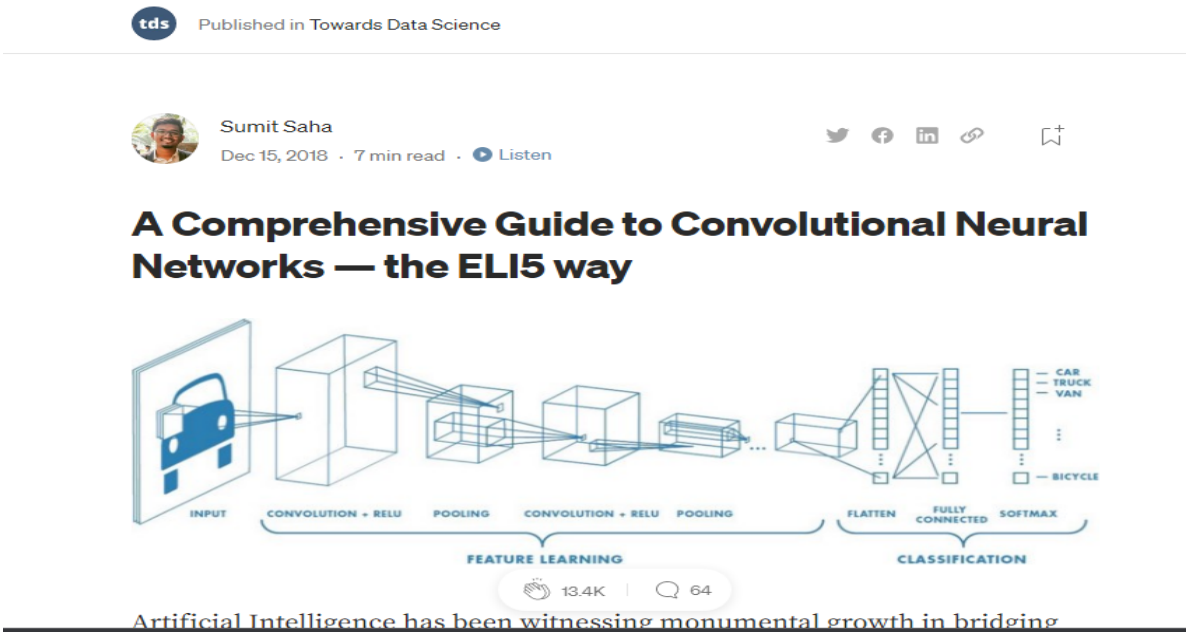
Project Development Phase
Delivery of Sprint-3

Date	**12.11.2022**
Team ID	PNT2022TMID53601
Project Name	Project - A Novel Method for Handwritten Digit Recognition System

Creating HTML File

1. Create a new HTML File with a neat UI and reference material for Convolutional Neural Networks





Build the Python code

2. Build the python code inside the app.py file

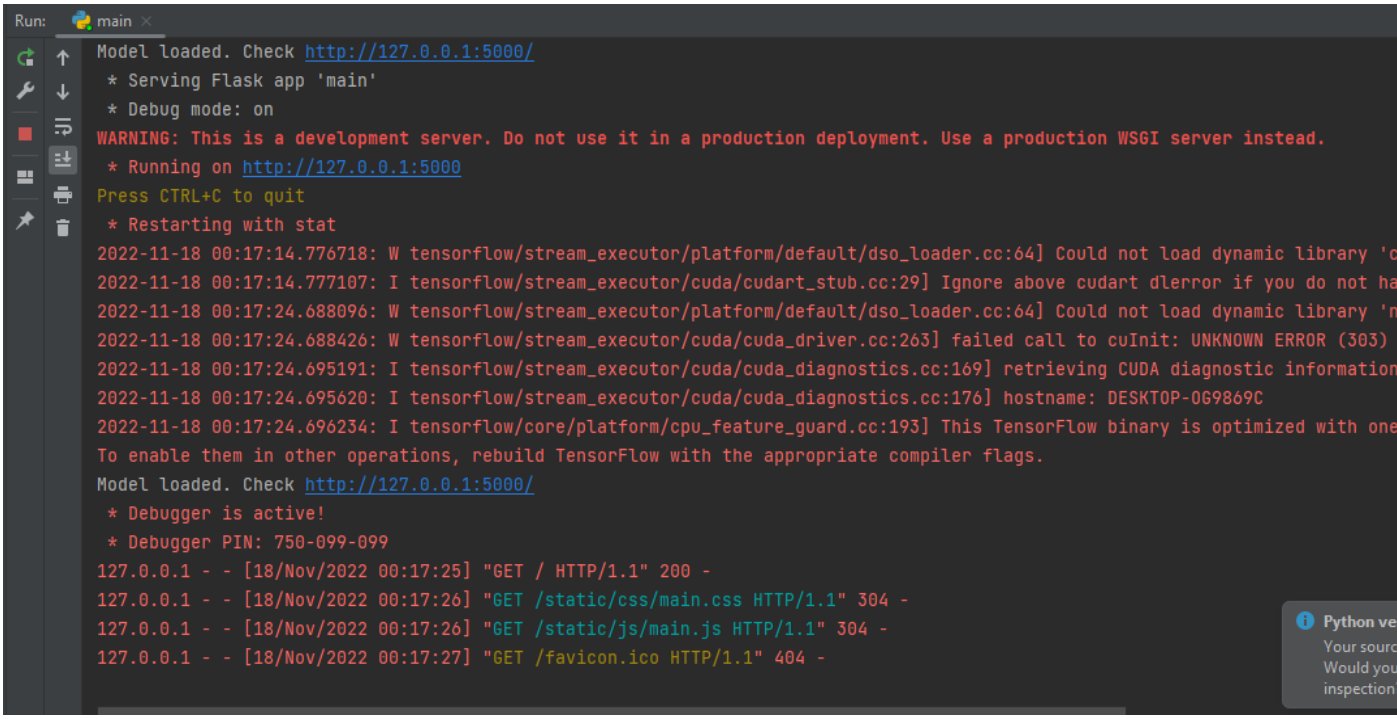
```
# Model saved with Keras model.save()
MODEL_PATH = 'bestmodel.h5'

# Load your trained model
model = load_model(MODEL_PATH)
model.make_predict_function()          # Necessary

# print('Model loaded. Start serving...')

print('Model loaded. Check http://127.0.0.1:5000/')


Kishore Muthuselvan
def model_predict(img_path, model):
    model = keras.models.load_model('bestmodel.h5')

    img = cv2.imread(img_path)[:, :, 0]
    img = cv2.resize(img, (28, 28))
   # cv2.imshow('image',img)
    img = np.invert(np.array([img]))
    prediction = model.predict(img)
    return str(np.argmax(prediction))
```

```
Kishore Muthuselvan
@app.route('/', methods=['GET'])
def index():
    # Main page
    return render_template('index.html')


Kishore Muthuselvan
@app.route('/predict', methods=['GET', 'POST'])
def upload():
    if request.method == 'POST':
        # Get the file from post request
        f = request.files['file']

        # Save the file to ./uploads
        basepath = os.path.dirname(__file__)
        file_path = os.path.join(
            basepath, 'uploads', secure_filename(f.filename))
        f.save(file_path)

        # Make prediction
        preds = model_predict(file_path, model)
        return preds
    return None
```

```
if __name__ == '__main__':
    app.run(debug=True)
```

Run the application

3. Run the application and see the output in localhost


Run:
main
Model loaded. Check http://127.0.0.1:5000/
* Serving Flask app 'main'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with stat
2022-11-18 00:17:14.776718: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic library 'c
2022-11-18 00:17:14.777107: I tensorflow/stream_executor/cuda/cudart_stub.cc:29] Ignore above cudart dlerror if you do not ha
2022-11-18 00:17:24.688096: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic library 'n
2022-11-18 00:17:24.688426: W tensorflow/stream_executor/cuda/cuda_driver.cc:263] failed call to cuInit: UNKNOWN ERROR (303)
2022-11-18 00:17:24.695191: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:169] retrieving CUDA diagnostic information
2022-11-18 00:17:24.695620: I tensorflow/stream_executor/cuda/cuda_diagnostics.cc:176] hostname: DESKTOP-0G9869C
2022-11-18 00:17:24.696234: I tensorflow/core/platform/cpu_feature_guard.cc:193] This TensorFlow binary is optimized with one
To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
Model loaded. Check http://127.0.0.1:5000/
* Debugger is active!
* Debugger PIN: 750-099-099
127.0.0.1 - - [18/Nov/2022 00:17:25] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [18/Nov/2022 00:17:26] "GET /static/css/main.css HTTP/1.1" 304 -
127.0.0.1 - - [18/Nov/2022 00:17:26] "GET /static/js/main.js HTTP/1.1" 304 -
127.0.0.1 - - [18/Nov/2022 00:17:27] "GET /favicon.ico HTTP/1.1" 404 -
Python ve
Your sourc
Would you
inspection