Sprint-3

Application Building

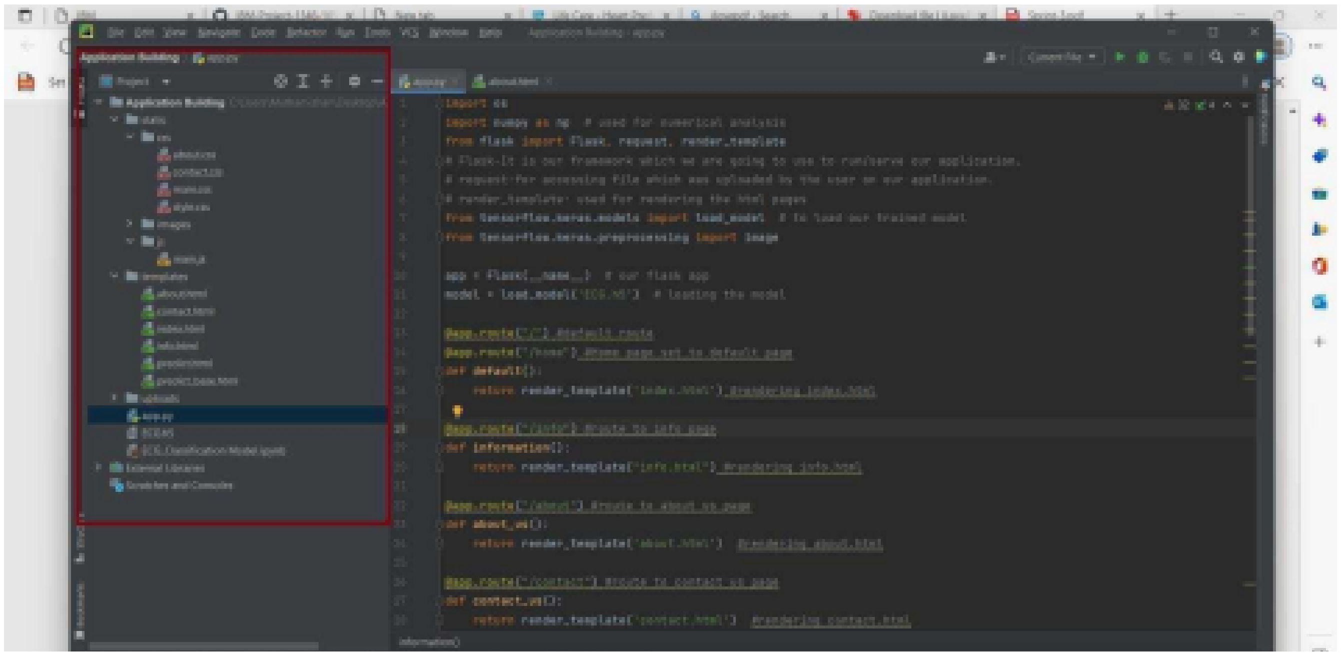
BUILD THE PYTHON CODE

Date:	18 November 2022
Team ID:	PNT2022TMID36166
Project Name:	**Classification Of Arrhythmia By Using Deep Learning With 2-D ECG Spectral Image Representation**

TASK:

Build the python code

PROJECT STRUCTURE:



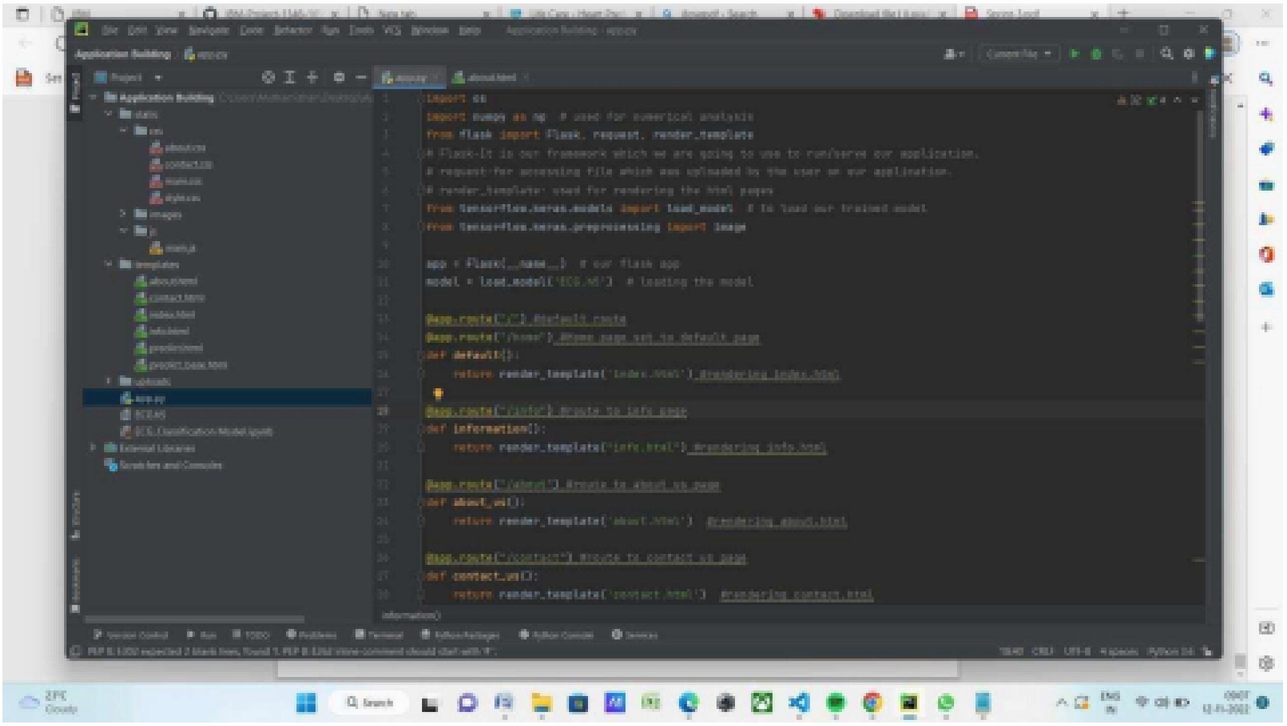
```
import os
import numpy as np  # used for numerical analysis
from flask import Flask, request, render_template
# Flask-It is our framework which we are going to use to run/serve our application.
# request-for accessing file which was uploaded by the user on our application.
# render_template: used for rendering the html pages
from tensorflow.keras.models import load_model  # to load our trained model
from tensorflow.keras.preprocessing import image

app = Flask(__name__)  # our flask app
model = load_model('ECG.h5')  # loading the model

@app.route('/') #default route
@app.route('/home') #home page set to default page
def default():
    return render_template('index.html') #rendering index.html

@app.route('/info') #route to info page
def information():
    return render_template('info.html') #rendering info.html

@app.route('/about') #route to about us page
def about_us():
    return render_template('about.html')  #rendering about.html

@app.route('/contact') #route to contact us page
def contact_us():
    return render_template('contact.html')  #rendering contact.html
```

APP.PY:

```
            import os
            import numpy as np # used for numerical analysis
   from flask import Flask, request, render template
   # Flask-It is our framework which we are going to use to run/serve our
   application.
   # request-for accessing file which was uploaded by the user on our application.
   # render template- used for rendering the html pages
   from tensorflow.keras.models import load model # to load our trained model
   from tensorflow.keras.preprocessing import image

   app = Flask name # our flask app
   model = load model('ECG.h5') # loading the model

   @app.route("/") #default route
   @app.route("/home") #Home page set to default page
   def default():
   return render template('index.html') #rendering index.html

   @app.route("/info") #route to info page
   def information():
   return render template("info.html") #rendering info.htm1

   @app.route("/about") #route to about us page
```

```
def about us():
return render template('about.html') #rendering about.html @app.route("/contact")

#route to contact us page

        def contact us():
          return render template('contact.html') #rendering contact.html

        @app.route("/upload") #default route
        def test():
           return render template("predict.html") #rendering contact.html

        @app.route("/predict",methods=["GET","POST"]) #route for our
        prediction
        def upload():
          if request.method == 'POST".
              f= request.files['file'] # requesting the file
              basepath = os.path.dirname(' file ') # storing the file directory
        filepath = os.path.join(basepath, "uploads", f.filename) # storing the file in
        uploads folder
              f.save(filepath) # saving the file

              img = image.load img(filepath, target size=(64, 64)) # load and
        reshaping the image
              x = image.img to array(img) # converting image to array x =
            np.expand dims(x, axis=0) # changing the dimensions of the image


                preds = model.predict(x) # predicting classes

                pred = np.argmax(preds, axis=1) # predicting classes

                print("prediction", pred) # printing the prediction
                index = ['Left Bundle Branch Block', 'Normal', 'Premature Atrial

            Contraction',

                          'Premature Ventricular Contractions', 'Right Bundle Branch

            Block', 'Ventricular Fibrillation']

                result = str(index[pred[0]])

                return result # Gesturing the result

              return None



    # port = int(os.getenv("PORT"))
            if name == " main "

              app.run(debug=False) # running our app
      # app.run(host='0.0.0.0', port=8000)
```

APP.PY(SCREEN SHOT):



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