

# SPRINT-3

## APPLICATION BUILDING

### HTML FILE

Date	21 November 2022
Team ID	PNT2022TMID03593
Project Name	Project - Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral ImageRepresentation
Sprint	3

#### HTML CODE FOR HOME (INDEX PAGE):

```
import numpy as np
import os
from tensorflow.keras.models import load_model
from tensorflow.keras.preprocessing import image
from flask import Flask,render_template,request

app=Flask(__name__)

model=load_model('C:/Users/dharshini/Desktop/Sprint_3/Application building/ECG.h5')

@app.route('/')
def index():
    return render_template("index.html")

@app.route('/predict',methods=['GET','POST'])
def upload():
```

```
text=""

if request.method=='POST':
    f=request.files['image']
    basepath=os.path.dirname(_file_)
    filepath=os.path.join(basepath,'uploads',f.filename)
    f.save(filepath)
    img=image.load_img(filepath,target_size=(64,64))
    x=image.img_to_array(img)
    x=np.expand_dims(x,axis=0)
    pred=np.argmax(model.predict(x),axis=1)
    if pred==0:
        text="left Bundle Branch
        block" print(text)

    elif pred==1:
        text="Normal"
        print(text)

    elif pred==2:
        text="Premature Atrial Contraction"
        print(text)

    elif pred==3:
        text="Premature Ventricular Contraction"
        print(text)

    elif pred==4:
        text="Right Bundle Branch
        Block" print(text)
```

```

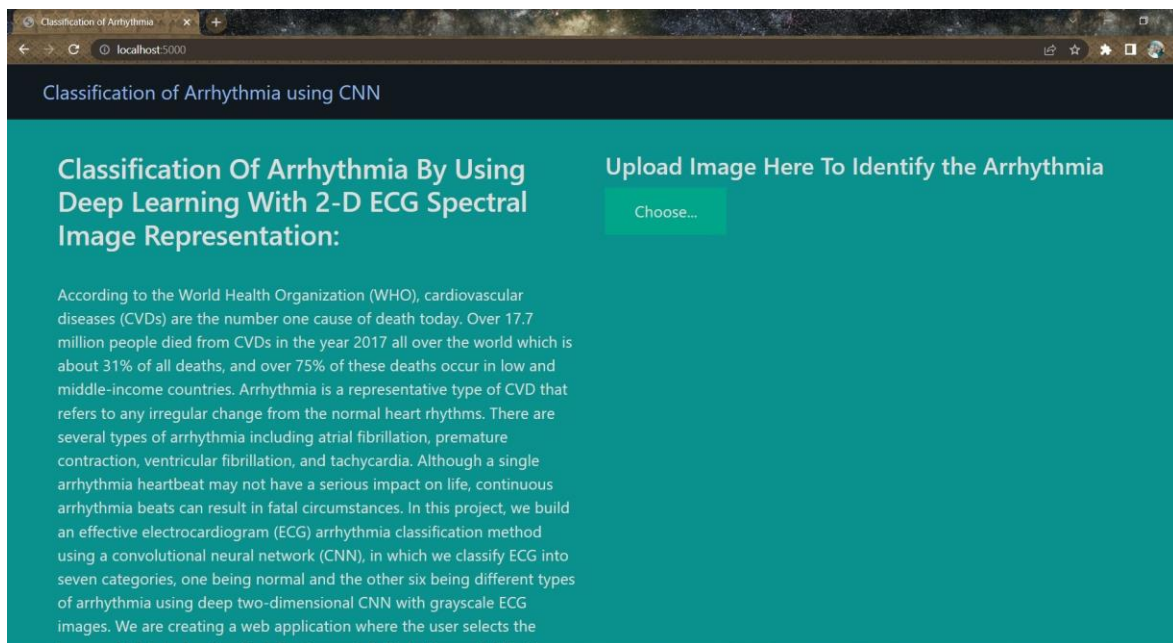
else:
    text="Ventricular
    Fibrillation"print(text)

return text

if __name__=='_main_':
    app.run(debug=False)

```

## INDEX PAGE (SCREEN SHOT):



Classification of Arrhythmia

localhost:5000

Arrhythmias ... Why?

Electrical System of the Heart

The diagram illustrates the electrical system of the heart, showing the conduction pathway. The pathway starts at the Sinoatrial (SA) Node, which is located in the right atrium. It then travels through the Anterior Internodal Tract, Middle Internodal Tract, and Posterior Internodal Tract to the Atrioventricular (AV) Node. From the AV Node, the pathway splits into the Right Bundle Branch and the Left Bundle Branch. The Right Bundle Branch leads to the Conduction Pathways, which then lead to the Left Bundle Branch. The diagram also shows Bachmann's Bundle, which connects the two atria.

- Sinoatrial (SA) Node
- Bachmann's Bundle
- Anterior Internodal Tract
- Middle Internodal Tract
- Posterior Internodal Tract
- Atrioventricular (AV) Node
- Right Bundle Branch
- Left Bundle Branch
- Conduction Pathways