

SPRINT- 3

APPLICATION BUILDING

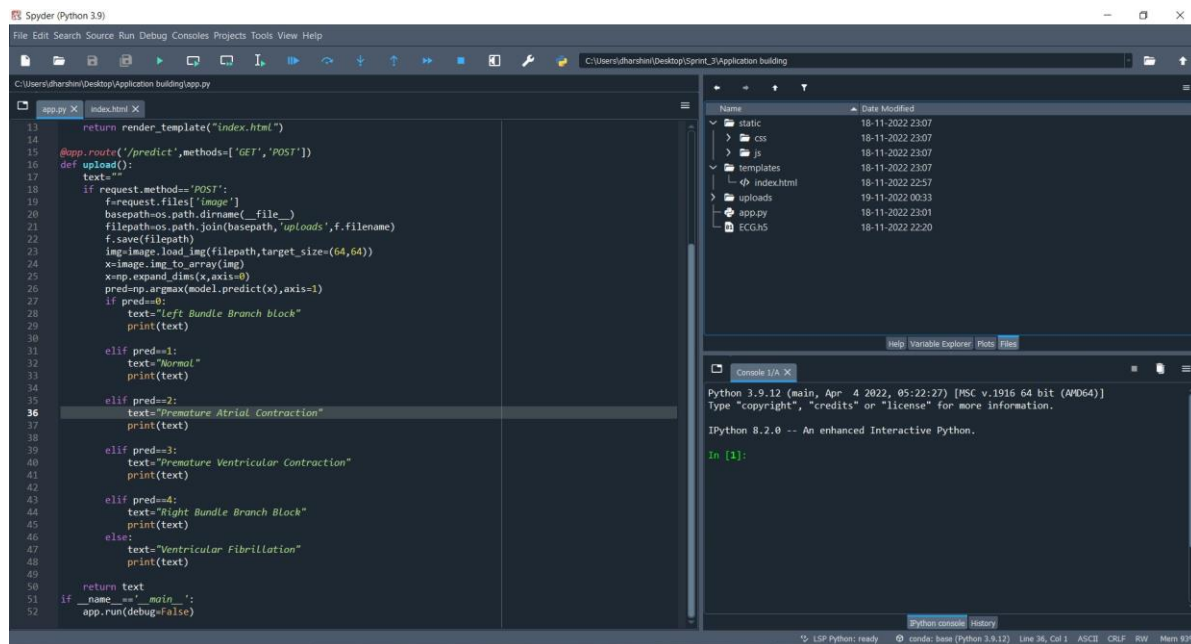
RUN THE APP

Date	20 November 2022
Team ID	PNT2022TMID03593
Project Name	Project - Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral ImageRepresentation
Sprint	3

TASK:

Run The App

RUN ON LOCAL HOST (SCREEN SHOT):



```
Anaconda Prompt (anaconda3) - python app.py

(base) C:\Users\dhharshini>conda activate tf

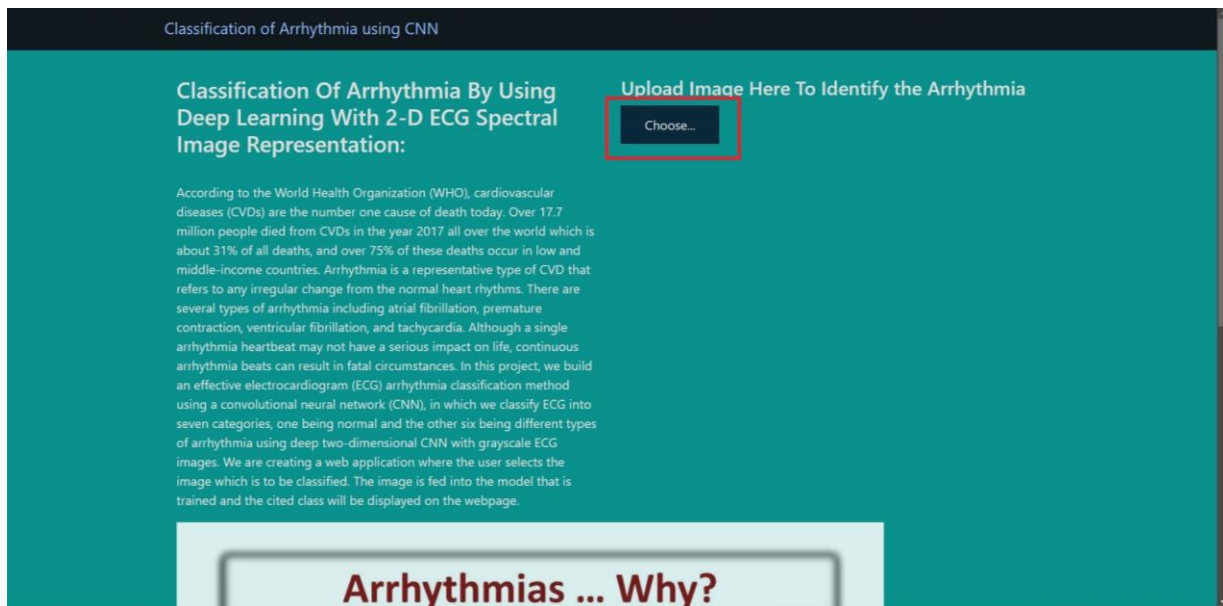
(tf) C:\Users\dhharshini>cd desktop

(tf) C:\Users\dhharshini\Desktop>cd sprint_3

(tf) C:\Users\dhharshini\Desktop\Sprint_3>cd application building

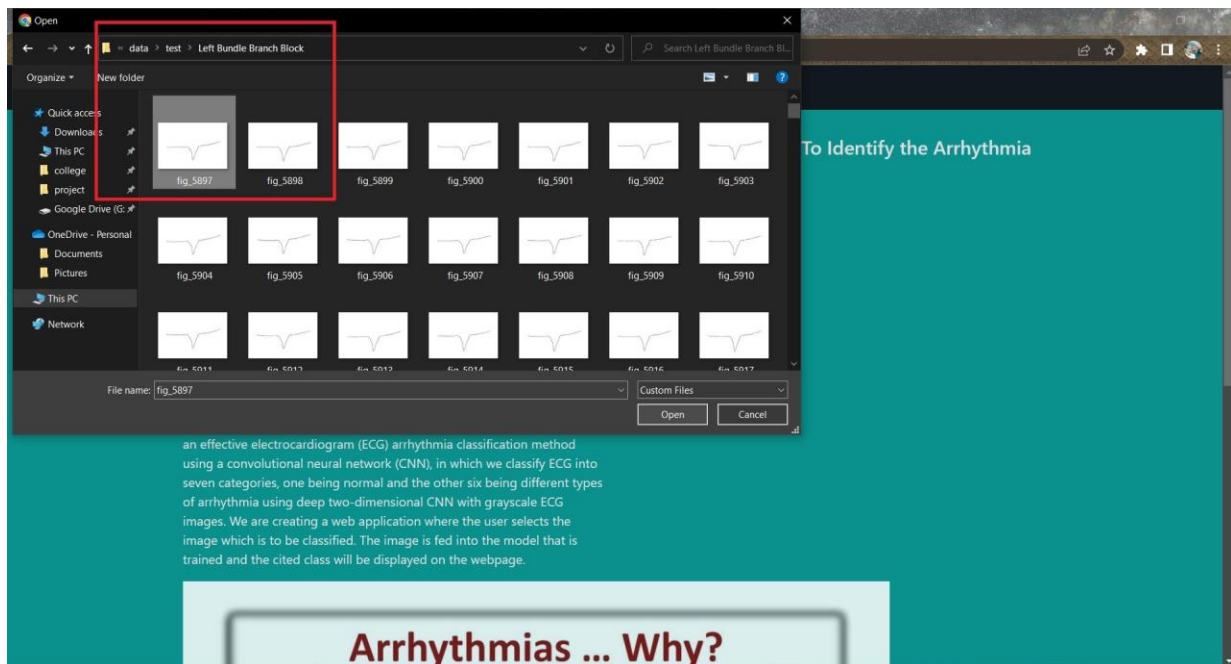
(tf) C:\Users\dhharshini\Desktop\Sprint_3\Application building>python app.py
2022-11-19 02:48:40.051102: I tensorflow/core/platform/cpu_feature_guard.cc:193] This TensorFlow binary is optimized with oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-critical operations: AVX2
To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
2022-11-19 02:48:40.058991: I tensorflow/core/common_runtime/process_util.cc:146] Creating new thread pool with default inter op setting: 2. Tune using inter_op_parallelism_threads for best performance.
* Serving Flask app 'app'
* Debug mode: off
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
```

CLICK CHOOSE BUTTON (SCREEN SHOT):

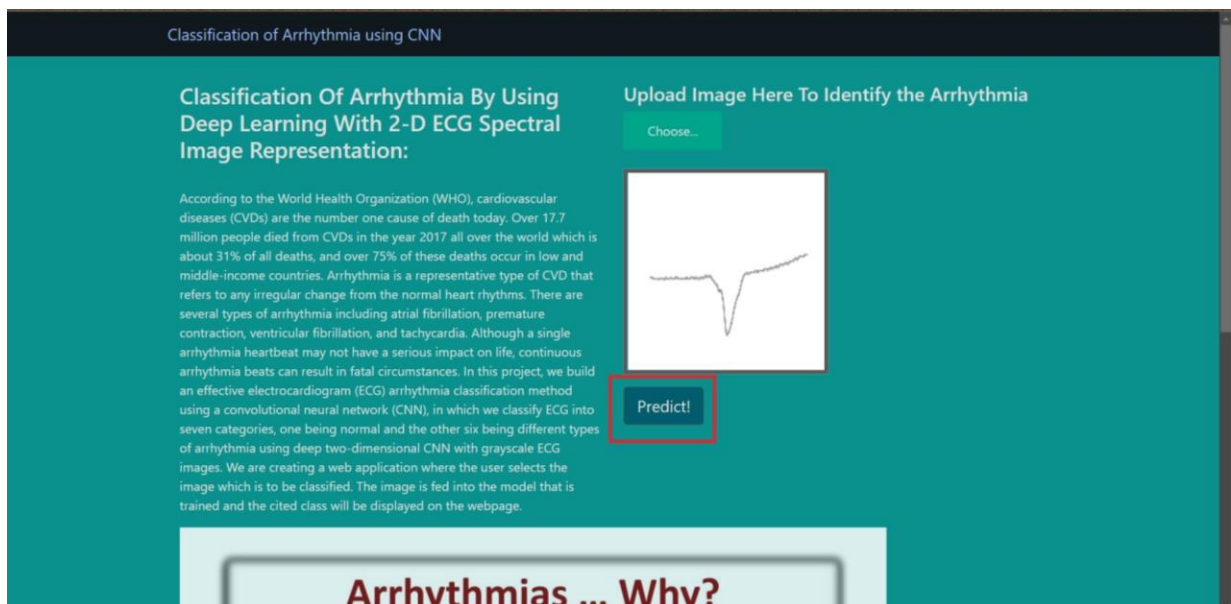


GO TO FILE

SELECT ANY FILE (SCREEN SHOT):



CLICK PREDICT BUTTON (SCREEN SHOT):



SHOW ON RESULT (SCREEN SHOT):

THUS, PREDICTED THE CORRECT ECG IMAGE SAMPLES.


Classification of Arrhythmia using CNN

Classification Of Arrhythmia By Using Deep Learning With 2-D ECG Spectral Image Representation:

According to the World Health Organization (WHO), cardiovascular diseases (CVDs) are the number one cause of death today. Over 17.7 million people died from CVDs in the year 2017 all over the world which is about 31% of all deaths, and over 75% of these deaths occur in low and middle-income countries. Arrhythmia is a representative type of CVD that refers to any irregular change from the normal heart rhythms. There are several types of arrhythmia including atrial fibrillation, premature contraction, ventricular fibrillation, and tachycardia. Although a single arrhythmia heartbeat may not have a serious impact on life, continuous arrhythmia beats can result in fatal circumstances. In this project, we build an effective electrocardiogram (ECG) arrhythmia classification method using a convolutional neural network (CNN), in which we classify ECG into seven categories, one being normal and the other six being different types of arrhythmia using deep two-dimensional CNN with grayscale ECG images. We are creating a web application where the user selects the image which is to be classified. The image is fed into the model that is trained and the cited class will be displayed on the webpage.

Upload Image Here To Identify the Arrhythmia

Choose...



Result: left Bundle Branch block

Arrhythmias ... Why?