Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

PROJECT FLOW

Team ID	PNT2022TMID52395
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

PROJECT FLOW:

- The user interacts with a web camera to read the video.
- Once the input image from the video frame is sent to the model, if the fire is detected it is showcased on the console, and alerting sound will be generated and an alert message will be sent to the Authorities.

To accomplish this, we have to complete all the activities and tasks listed below

- Data Collection.
  - Collect the dataset or create the dataset.
- Image Preprocessing.
  - Import ImageDataGenerator Library.
  - Define the parameters /arguments for ImageDataGenerator class
  - Applying ImageDataGenerator on trainset and test set.
- Model Building
  - Import the model building Libraries
  - Initializing the model
  - Adding CNN Layers
  - Adding Hidden Layer
  - Adding Output Layer
  - Configure the Learning Process
  - Training and testing the model
  - Optimize the Model
  - Save the Model
- Video Streaming and alerting
  - OpenCV for video processing
  - Creating an account in Twilio service
  - Use Twilio API to send messages.