CLASSICATIONOFARRYTHMIABYUSINGDEEPLE ARNING WITH 2-D ECG SPECTRAL IMAGEREPRESENTATION

DATE	19 November 2022
TEAM ID	PNT2022TMID36166
PROJECT NAME	Classification Of Arrhythmia by Using Deep Learning With 2-D ECG Spectral Image Representation

Project Flow

- User interacts with User interface to upload image
- Uploaded image is analyzed by the model which is integrated
- Once model analyses the uploaded image, the prediction is showcased on the UI
- To accomplish this, we have to complete all the activities and tasks listed below

Data Collection

- Collect the dataset or Create the dataset

Data Preprocessing

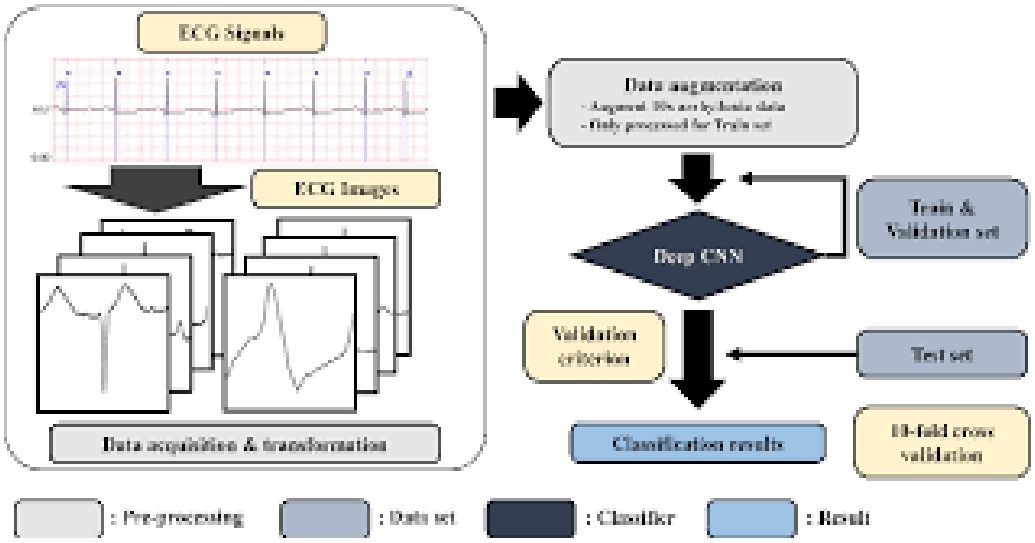
- Import the Image Data Generator library
- Configure Image Data Generator class
- Apply Image Data Generator functionality to Train set and Test set

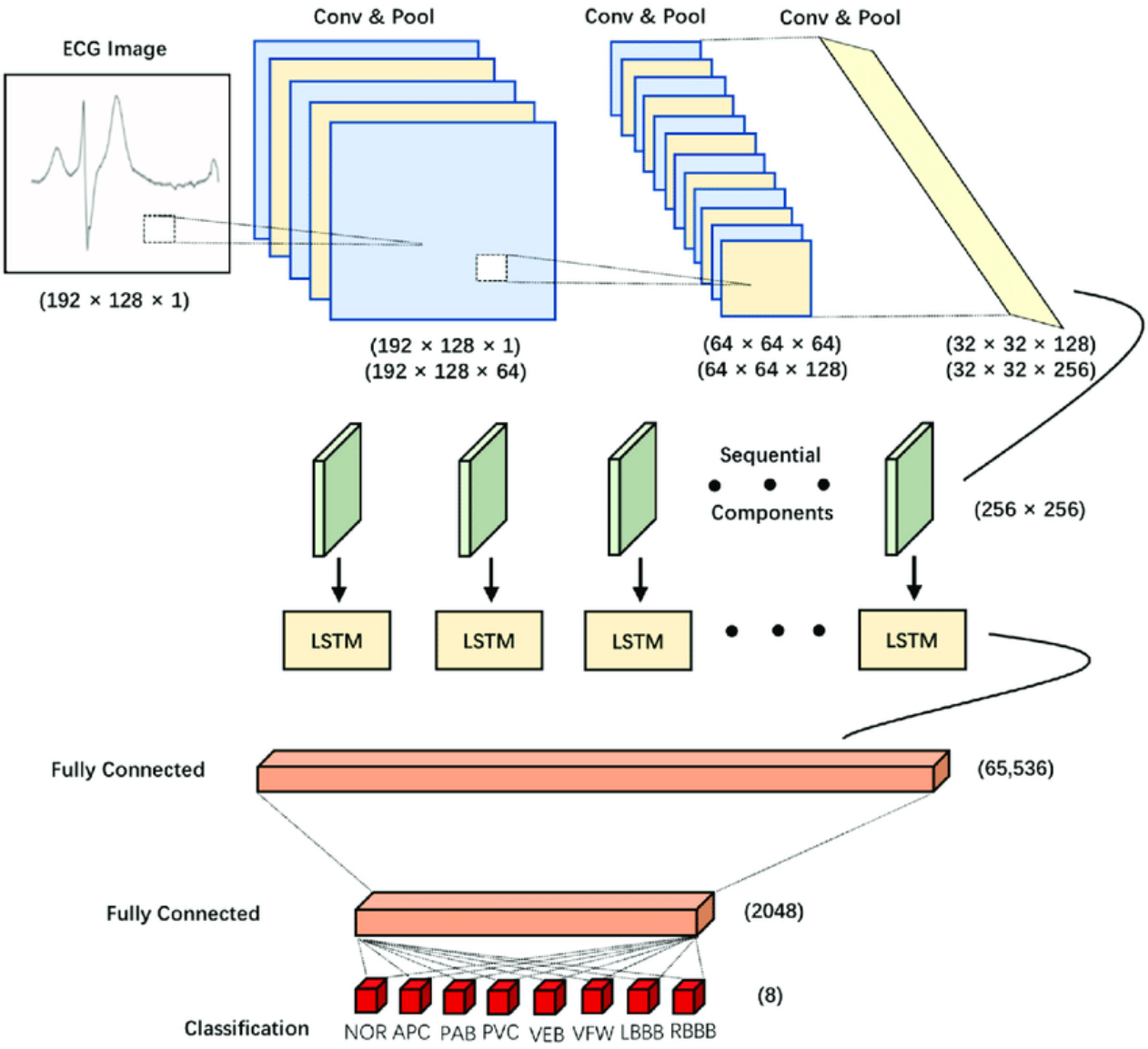
Model Building

- Import the model building Libraries
- Initializing the model
- Adding Input Layer
- Adding Hidden Layer
- Adding Output Layer
- Configure the Learning Process
- Training and testing the mode
- Optimize the Model
- Save the Model

Application Building

- Create an HTML file
- Build Python Code




ECG Image
(192 × 128 × 1)
Conv & Pool
(192 × 128 × 1)
(192 × 128 × 64)
Conv & Pool
(64 × 64 × 64)
(64 × 64 × 128)
Conv & Pool
(32 × 32 × 128)
(32 × 32 × 256)
Sequential
Components
(256 × 256)
LSTM
LSTM
LSTM
LSTM
Fully Connected
(65,536)
Fully Connected
(2048)
Classification
NOR APC PAB PVC VEB VFW LBBB RBBB
(8)