Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	23 October 2022
Team ID	PNT2022TMID30834
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	4 Marks

Technical Architecture:

Here the given below one is the technical diagram for the model. We also provided with the components & the technologies and the application characteristics of the model in the table 1 and the table 2 respectively.

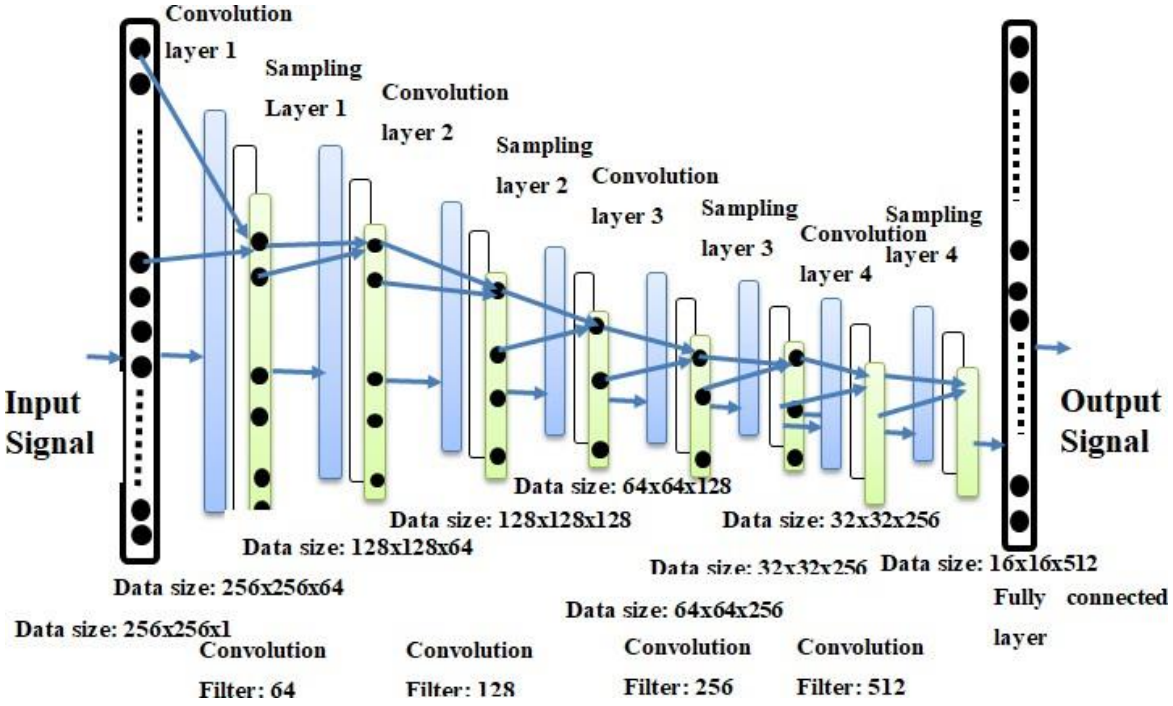

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile UI.	HTML, CSS, JavaScript / React Js.
2.	Application Logic-1	Python 3 is used for backend	Python 3
3.	Application Logic-2	It's a symbolic math toolkit that performs a variety of tasks including deep neural network training and inference using dataflow and differentiable programming	Tensorflow
4.	Cloud Database	A global technology and a flagship company that provides hardware, software, cloud-based services and cognitive computing.	IBM Cloud
5.	File Storage	Breaks up data into blocks and then stores those blocks as separate pieces, each with a unique identifier.	IBM Block
6.	External API-1	External application interfaces used in the Application.	IBM Weather API, etc.
7.	External API-2	External application interfaces used in the Application.	Aadhar API, etc.
8.	Machine Learning Model	Object recognition is a subfield of computer vision, artificial intelligence, and deep machine learning.	Object Recognition Model
9.	Deep learning Model	The images from the created dataset are feed into a neural network algorithm.	2-D Image Recognition Model

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It is used to build an interfaces based on UI components.	React Js
2.	Security	IBM Security Services and Zscaler **enable organizations to securely access their key applications on-premise or in the cloud, from anywhere for any persona type**.	IBM Security Services and Zscaler **.**
3.	Architecture	A modular client-server architecture that consists of a presentation tier, an application tier and a data tier	Three-tier architecture
4.	Availability of the data	Simultaneous data modification and accessing .	Distributed Server
5.	Performance of the model	Increasing data retrieval performance by reducing the need to access the underlying slower storage layer.	Cache