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

Date	08 NOVEMBER 2022
Team ID	PNT2022TMID46647
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

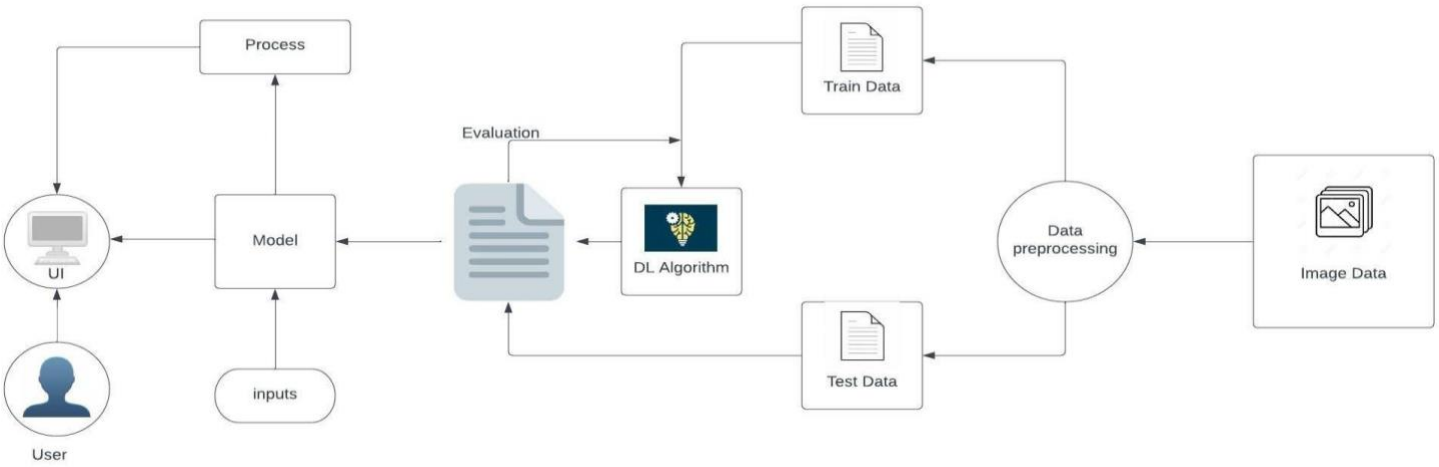

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application - Web UI	HTML, CSS, JavaScript / React Js etc.
2.	Application Logic	The ECG signal was transformed into a 2-D representation, a 2-D CNN algorithm was used for classification.	Python
3.	Database	Data Type, Configurations etc.	MySQL , MS SQL or oracle
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
5.	File Storage	File storage requirements	Local Filesystem
6.	External API	Defines communication between each requests and responses.	Flask(python), Keras, Tensorflow
7.	Machine Learning Model	Training and testing.	CNN

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open source software is that by which the source code or the base code is usually available for modification or enhancement.	Flask(python)

2.	Security Implementations	By placing a filtration barrier between the targeted server and the attacker, the WAF is able to protect against attacks like cross site forgery, cross site scripting and SQL injection.	e.g.Encryptions, IAM Controls, SHA-256 etc.
S.No	**Characteristics**	**Description**	**Technology**
3.	Scalable Architecture	Does not affect the performance even though used by many users at the same time.	Django or Flask
4.	Availability	Anyone who is authorised.	Django or Flask
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	NeoLoad