

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

Date	03 October 2022
Team ID	PNT2022TMID37351
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

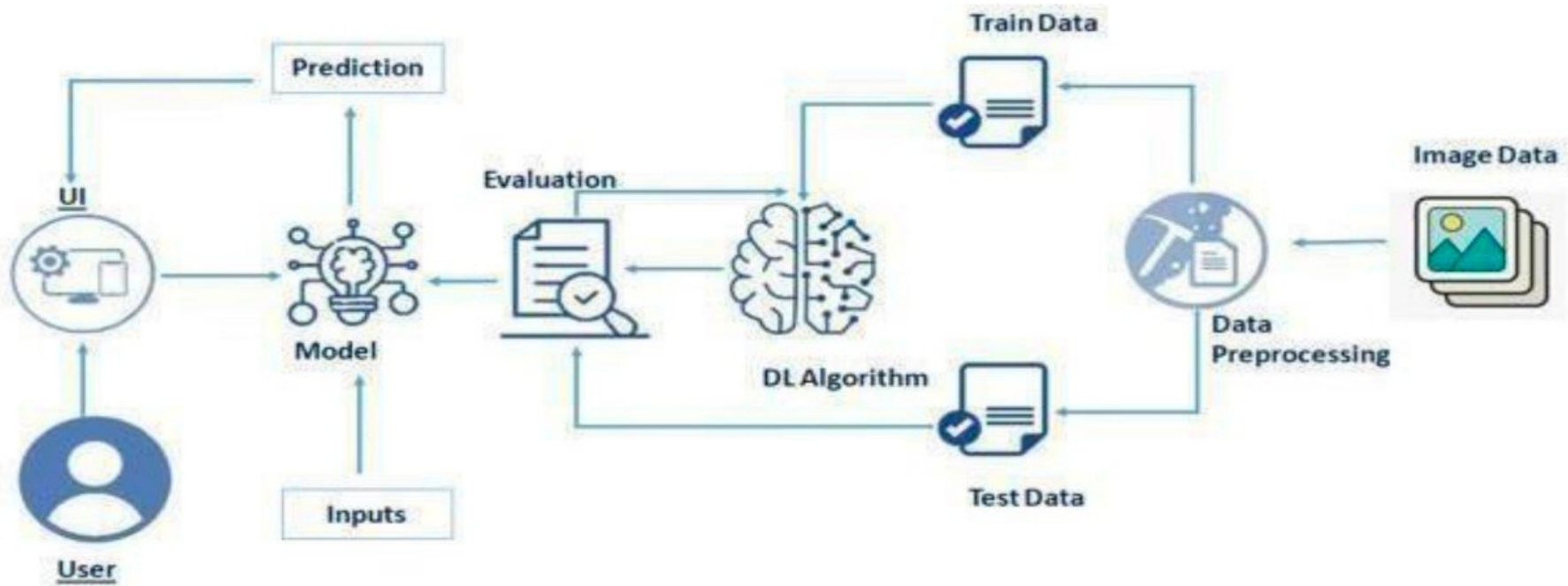


Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How the user interact with the user interface to upload the image	Anaconda, jupyter, spyder, python
2.	Model analyses	Once model analyses the uploaded image, the prediction is showcased on the UI	Kaggle.com, data. gov, UCI
3.	Data collection	Create the dataset	Python, keras, numpy
4.	Data Preprocessing-1	Import the ImageDataGenerator library	Python, keras, numpy
5.	Data Preprocessing-2	Configure ImageDataGenerator class	Python, numpy, keras
6.	Data Preprocessing-3	Apply ImageDataGenerator functionality to Trainset and Testset	Python, numpy, keras
7.	Model Building-1	Import the model building libraries and Initialize the model	Python, numpy, keras

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 the public for further modification or enhancement.	Flask(python)
2.	Security Implementations	By providing access of data to the authorized people and by 2 step verification method data can be kept secured.	e.g., OTP, verification via mail
3.	Scalable Architecture	Many users can use the application at the same time without degradation in their performance and produces accurate result.	-
4.	Availability	Since it is open source, it will be available to all the user who are in access to internet.	internet
5.	Performance	Multiple users can use the application at the same time without degradation in their performance.	-