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

Date	15 October 2022
Team ID	PNT2022TMID35787
Project Name	Project – Classification of Arrhythmia using Deep learning with 2D spectral Image Representation
Maximum Marks	4 Marks

Technical Architecture:

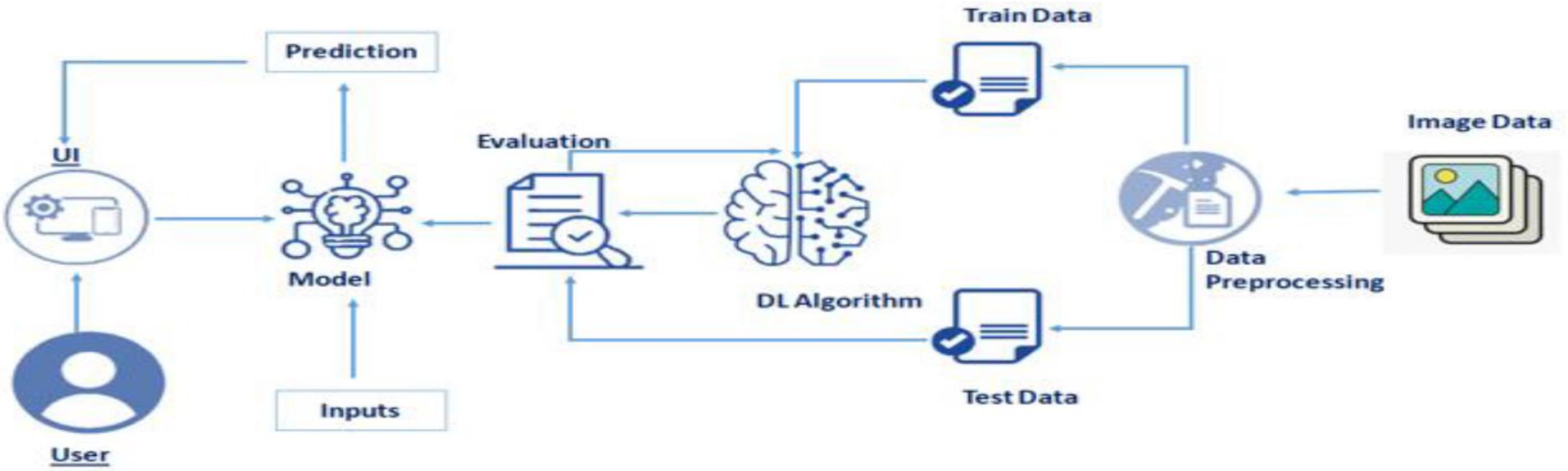

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Form UI	HTML, CSS, JavaScript
2.	Application Logic-1	Data Preprocessing, Data Segmentation	TensorFlow, Keras, Numpy, Pandas
3.	Application Logic-2	CNN	TensorFlow , Keras
4.	Application Logic-3	Web application	Flask
5.	Database	MIT-Images (png)	Pytorch
6.	Cloud Database	Database Service on Cloud	IBM Watson
7.	File Storage	File storage requirements	IBM Block Storage /Google Drive
8.	External API-1	Image Processing API	Keras , Tensorflow
9.	Machine Learning Model	ECG (Electro Cardio Gram) classification using CNN	CNN -Keras,Tensorflow
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System	Local Host ,HTTP Server

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Visual Studio ,Google collab, Anaconda, Flask	Python, Machine Learning
2.	Security Implementations	Implementation of Cookies , Authentication	Cookies Session SESSION_COOKIE_SERVER
3.	Scalable Architecture	Micro Service	Micro web application Framework by flask
4.	Availability	Build in development server and fast debugger	Jinja2
5.	Performance	High Flexibility, High Accuracy, Reliable , HTTP request handling functionality, WSGI 1.0 complaint	Extensions,Jinja2,Werkezeug