

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	14 October 2022
Team ID	PNT2022TMID04852
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.

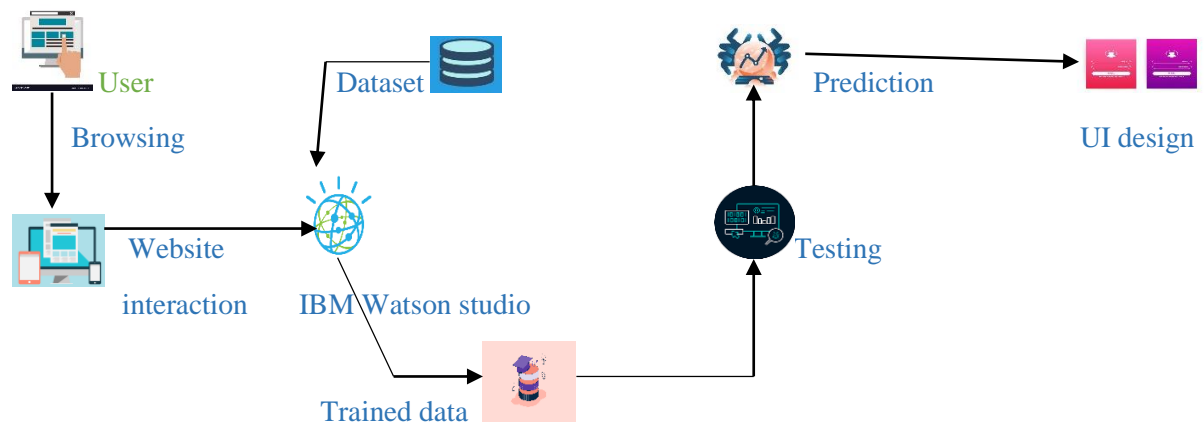


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile UI	HTML and CSS
2.	Application Logic-1	Python is used for backend	Python
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	IBM Cloud are software products for hybrid clouds that enable you to develop apps once and deploy them anywhere.	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	Purpose of External API used in the application.	IBM Weather API, etc.
7.	External API-2	Purpose of External API used in the application.	Aadhar API, etc.
8.	Machine Learning Model	Object recognition is a subfield of computer vision, artificial intelligence, and machine learning.	Object Recognition Model
9.	Deep learning Model	The images from the created dataset are fed into a neural network algorithm.	Image Recognition Model

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-source framework	Building user interfaces based on UI components.	React Js
2.	Security Implementations	OWASP is a nonprofit foundation that works to improve the security of software.	OWASP
3.	Scalable Architecture	A modular client-server architecture that consists of a presentation tier, an application tier and a data tier.	3-tier architecture
4.	Availability	The data on each server can be simultaneously accessed and modified via a network.	Distributed Server
5.	Performance	Increasing data retrieval performance by reducing the need to access the underlying slower storage layer.	Cach