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

Date	14 October 2022
Team ID	PNT2022TMID15718
Project Name	Classification of Arrhythmia by Using Deep Learning with 2-D ECG Spectral Image Representation

Technical Architecture:

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

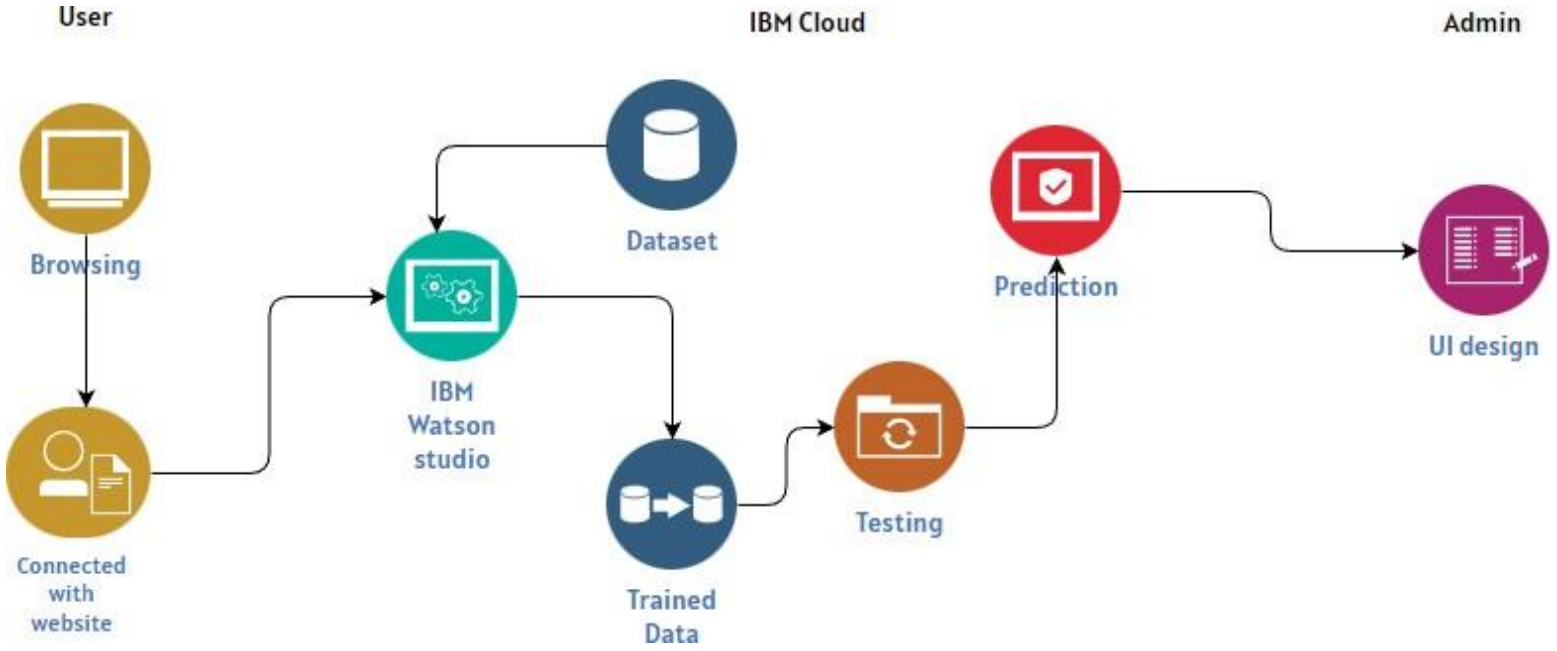

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile UI.	HTML, CSS, JavaScript / React Js.
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	A global technology 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	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 Frameworks	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.	Cache