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

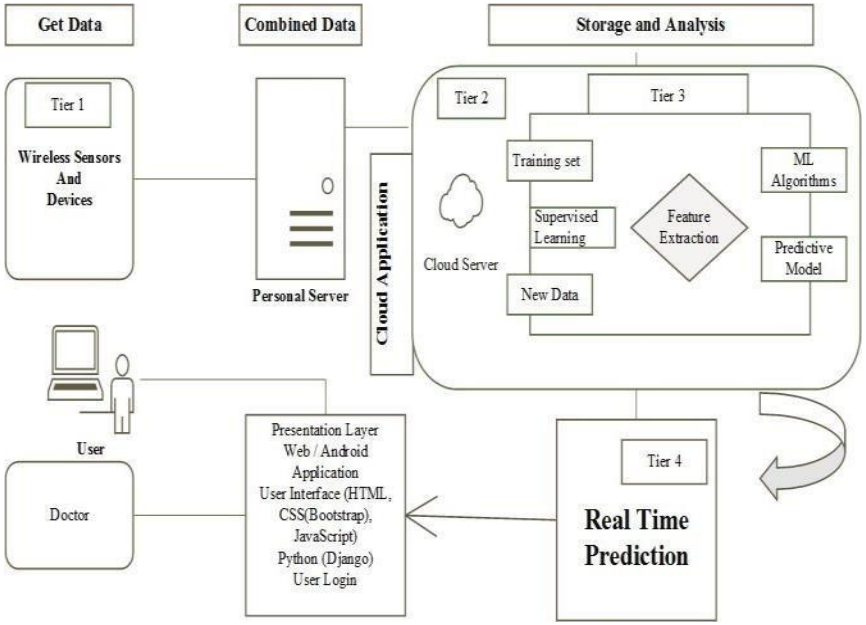
Date	21 october 2022
Team ID	PDT2022TMID52562
Project Name	Visualizing and Predicting Heart Diseases with an Interactive Dash Board
Maximum Marks	4 Marks

Technical Architecture:

Intravascular lithotripsy, or IVL, uses sonic pressure waves to safely break apart problematic calcium deposits in the arteries. The technology is a first-of-its-kind treatment for the most common form of heart disease. The technology is a first-of-its-kind treatment for the most common form of heart disease.

Example: Heart disease prevention

Reference: https://www.researchgate.net/figure/Proposed-architecture-for-early-detection-and-monitoring-of-heart-disease_fig6_329513229



Technical architecture explanation:

1. The process include as data can be combined and analyses using feature extraction.
2. Cloud servers can perform all the same functions of a traditional physical server, delivering processing power, storage and applications.)
3. The presentation layer, HTML,CSS, PYTHON where use to login.
4. The cloud acts as a storage medium which stores the data in the efficient way.
5. ML algorithm is used to predict the model which uses the labelled data and unlabeled data for processing, which is used to training and testing of the data.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The users interface **includes all the physical elements of a medical device that enable interaction between the user such as doctors, nurses and patients, as well as the device itself**.	HTML, CSS(Bootstrap), python etc.
2.	Data	Data which contains the information of the patients and their health conditions.	Wireless server is used.
3.	Combined data	Combined data is very useful to analyze the whole number of patients information with a detailed information.	Personal server
4.	Cloud application	It **uses a software, middleware, to ensure seamless connectivity between devices/computers linked via cloud computing.**	Cloud server, ml, feature selection.
5.	Cloud server	Which store the data which used as labelled and unlabelled data in an efficient way	ML, Feature selection. .
6.	Cloud Database	A cloud database is a database built to run in a public or hybrid cloud environment to **help organize, store, and manage data within an organization**	Data, training sets,
7.	File Storage	File storage medium **to organize and store data on a computer hard drive or on network-attached storage (NAS) device**	Labelled data and unlabelled data.
8.	HTML	HTML is the code that is used **to** structure a web page and its content.	Web development , libraries etc...
9.	CSS	Purpose CSS is to access the web page easily to generalize all the details of the patient.	CSS(Bootstrap).

10.	Machine Learning Model	Purpose of Machine Learning Model is a learning algorithm which uses a data as labelled and unlabelled data for analyses and then for training and testing of data.	Learning algorithms, ML, Feature selection
11.	Server	Cloud Config provides server and client-side support for externalized configuration in a distributed system. With the Config Server you have a central place to manage external properties for applications across all environments.	Local server, personal server.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	HTML, CSS(Bootstrap) which are used to login to the webpage with a valid username and password	HTML, CSS(Bootstrap), web development
2.	Security Implementations	Storage and analyzes which acts as a security medium contains the uses of tire and ml algorithms to acts as a storage medium.	Data, feature selection, learning algorithms.
3.	Scalable Architecture	Architecture is able to understand the workflow in the system which contains the data that can be labelled and tested and creates the login page to access the details of the patients.	Cloud, algorithms, html ,css etc,.
4.	Availability	The applications where worked in efficient manner Which helps to track the patients health in remote location.	Digital devices, wireless devices .
5.	Performance	Performance of the system used in an efficient way able to track the health conditions of the patient in a n interactive way.	Devices, algorithms etc..

References:

https://www.google.com/search?q=:%20https:%2F%2Fwww.researchgate.net%2Ffigure%2FProposed-architecture-for-early-detection-and-monitoring-of-heart-disease_fig6_329513229&tbm=isch&hl=en&sa=X&ved=0CAEQv7IFahcKEwiYs7CAl_D6AhUAAAAAHQAAAAAQBg&biw=1366&bih=657&dpr=1