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

Date	13 October 2022
Team ID	PNT2022TMID51040
Project Name	Early Detection of Chronic Kidney Disease using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

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

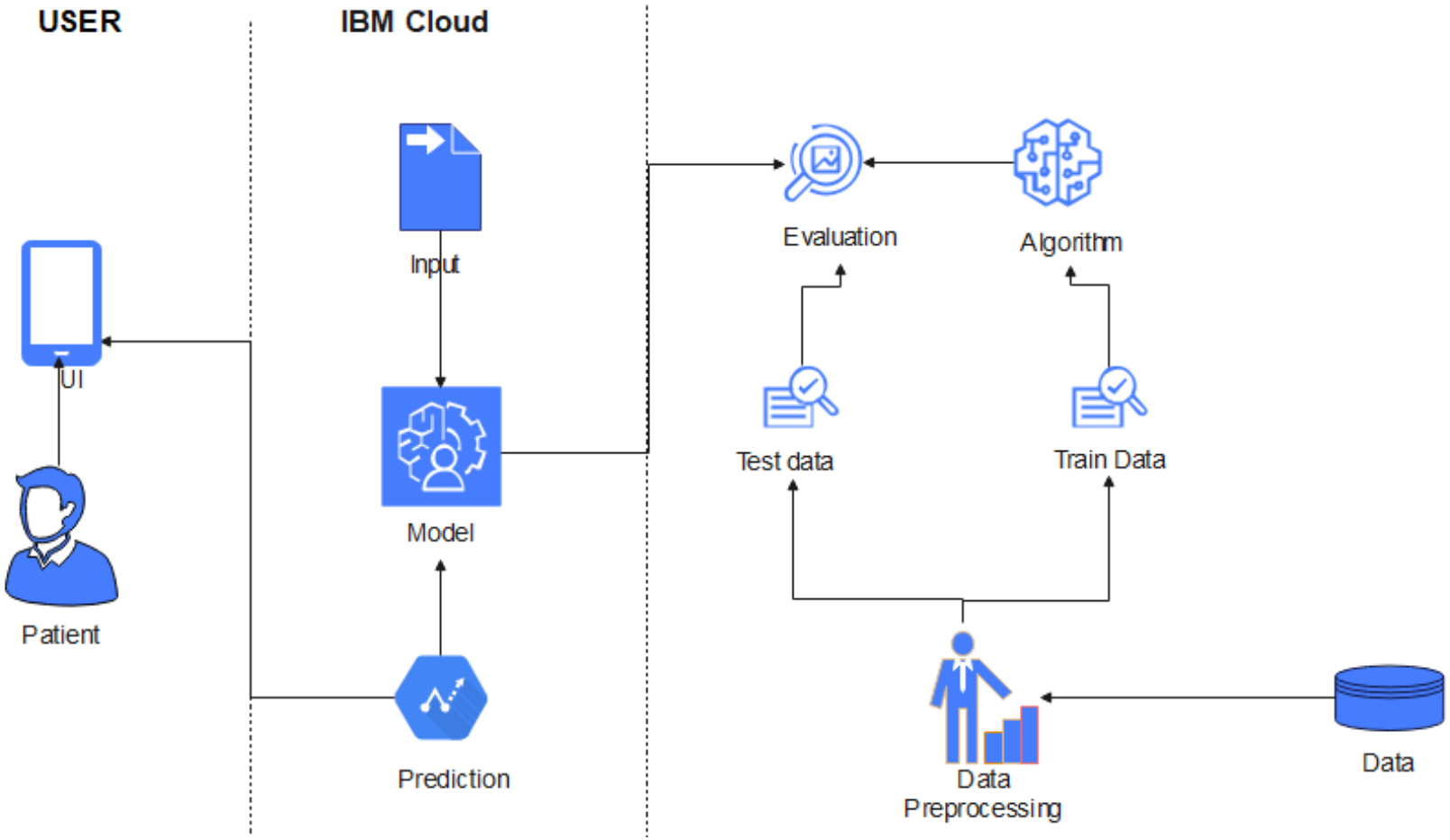
USER
IBM Cloud
Input
UI
Model
Patient
Prediction
Evaluation
Algorithm
Test data
Train Data
Data
Preprocessing
Data

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interact with our application?.	HTML, CSS and Python flask.
2.	Application Logic-1-[Registration].	User has to register first. So, he/she can continue with further process.	HTML ,CSS, Python flask.
3.	Application Logic-2-[Login].	Once the user finished their registration, he/she can see the login button to login into their accout.	HTML,CSS, Python flask.
4.	Application Logic-[Test/Analysis].	After Logged in , when the user click on the test button ,he/she directed to the form page to enter the vitals for prediction.	HTML,CSS, Python flask
5.	Database	Data type - String ,Numeric.	MySQL.
6.	Cloud Database	Database Service on Cloud	IBM.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem.
8.	External API-1	Purpose of External API used in the application	NIL
9.	External API-2	Purpose of External API used in the application	NIL
10.	Machine Learning Model	Get the data from the user and predict the data with tested and trained dataset models	Data Recognition Model, Data Classification Mode.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	NIL

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List of frameworks used.	Python flask, IBM cloud.
2.	Security Implementations	Passwords are hashed for security purpose.	SHA.
3.	Scalable Architecture	The key of Three tier architecture is improving scalability.	Three Tier architecture.
4.	Availability	Applications are highly available as they are deployed in cloud.	IBM Cloud.
5.	Performance	The system can handle large number of users in a simultaneous way and it can be done through load balancer.	Load balancer.