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

Date	20 October 2022
Team ID	PNT2022TMID49652
Project Name	Early Detection of Chronic Kidney Disease using Machine Learning.
Maximum Marks	4 Marks

Technical Architecture:

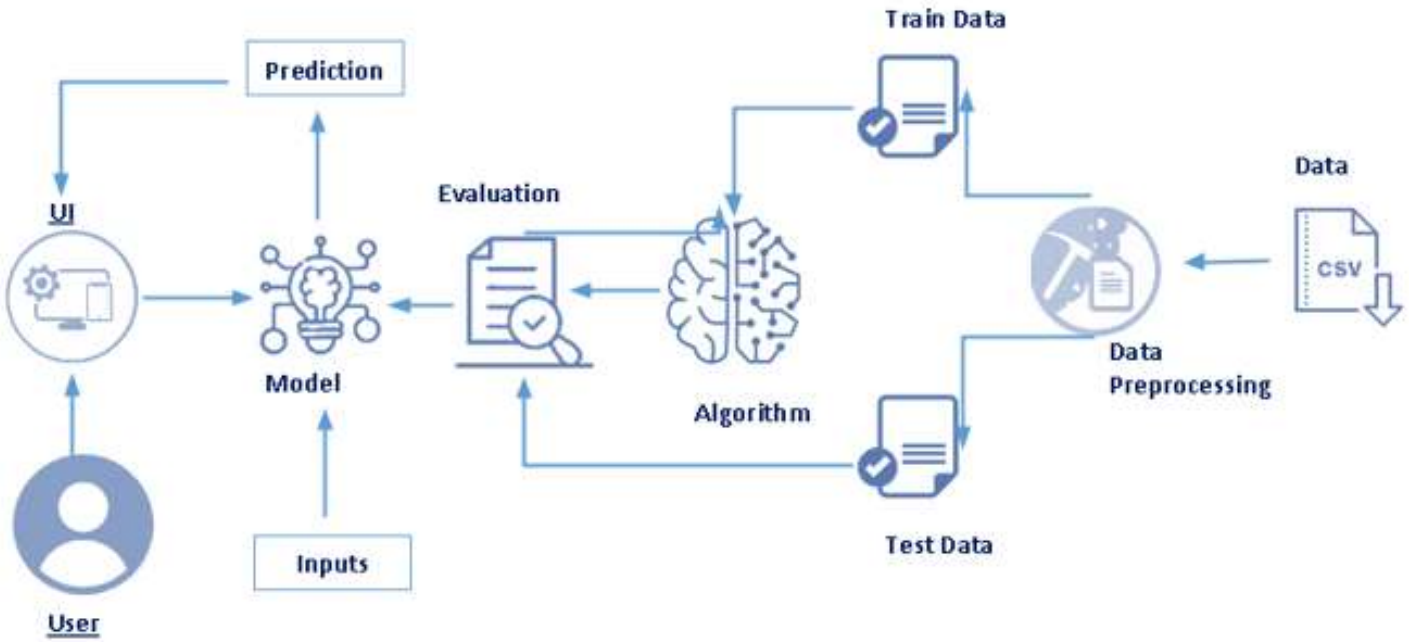

Table - 1 : Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	U ser can interacts with our web application through web user interface.	HTML, CSS, Python – Flask and Framework.
2.	Application Logic-1 (User Registration)	When the user click on the Register button, User is directed to Register page for further process.	HTML, CSS, Python – Flask.
3.	Application Logic-2 (Login)	When the user click on the login button, User is directed to login page, if they are registered already.	HTML, CSS, Python – Flask
4.	Application Logic-3 (User details form)	After logged in , when the user click on the user details form button, user directed to the form page to enter the vitals for prediction.	Front end - HTML ,CSS, My SQL, Python flask Back end – Python Framework - Flask
5.	Database	Data Type, Configurations – String, Variables and numeric values.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM Cloud Database
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	IBM (Framework) API – Pyhon Flask.
9.	External API-2	Purpose of External API used in the application	IBM (Framework) API – Python Flask.
10.	Machine Learning Model	Purpose of Machine Learning Model	Data Recognition Model, some other algorithm & techniques etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Enterprise software for Data Science, IBM Cloud, etc.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used	Technology of Open source framework, IBM Frameworks, etc.
2.	Security Implementations	The security / access controls implemented, use of firewalls etc.	Access permission for login page using CAPTCHA by using Encryption.
3.	Scalable Architecture	The scalability of architecture.	The key of Three tier architecture is improving scalability.
4.	Availability	The availability of application.	Load balancer or ADC is the key component that ensures high availability by sending request.
5.	Performance	Design consideration for the performance of the application.	The system should be able to handle large number of users at the time.