Project Design Phase-II
TECHNOLOGY ARCHITECTURE

Date	17 October 2022
Team ID	PNT2022TMID38667
Project Name	Project – Early Detection of Chronic Kidney Disease using Machine Learning
Maximum Marks	2 Marks

Technical Architecture:

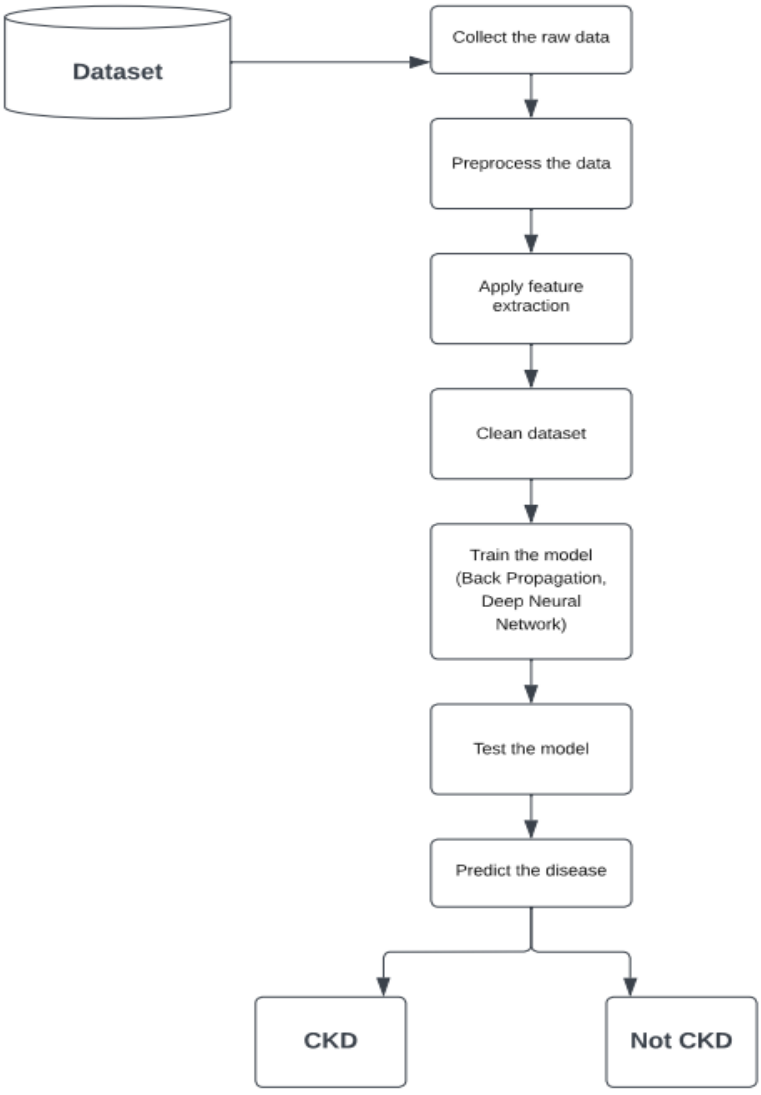

Table-1 :

Components & Technologies

S.No	Component	Description	Technology
1	User Interface	User interact with our application through web User Interface.	HTML, CSS, Python Flask
2	Registration	The user details will be stored and it will be used for further process	HTML, CSS, Python Flask
3	Login	Logic for a process in the application	IBM Watson STT Service
4	Client's input collection	User enters their diagnose report	Front end – HTML, CSS, MySQL, Python Flask Back end – Python
5	Database	For user registration and login process	MySQL
6	Machine Learning Model	Deep Learning Model gives 98% accuracy	Deep Learning Neural Network

Table 2:

Application Characteristics

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	International Business Machines	Cloud
2	Security Implementations	Authentication using stored data for login and CAPTCHA	Encryptions and Authentication
3	Scalable Architecture	This model can be expanded to include more attributes for more accurate detection. Training the model with even more attributes will increase the efficiency further	Performance optimization
4	Availability	It is used a website(UI) and trained model to 5predict , it will work at any time.	Web development
5	Performance	By using DNN, we can predict the chronic kidney disease with more than 95% of accuracy. In the DNN we have more hidden layers and hence its accuracy also high.	Deep Neural Network and back propagation