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

Date	19 October 2022
Team ID	PNT2022TMID02292
Project Name	Early Detection of Chronic Kidney Disease using Machine Learning
Maximum Marks	4 Marks

Technical architecture:

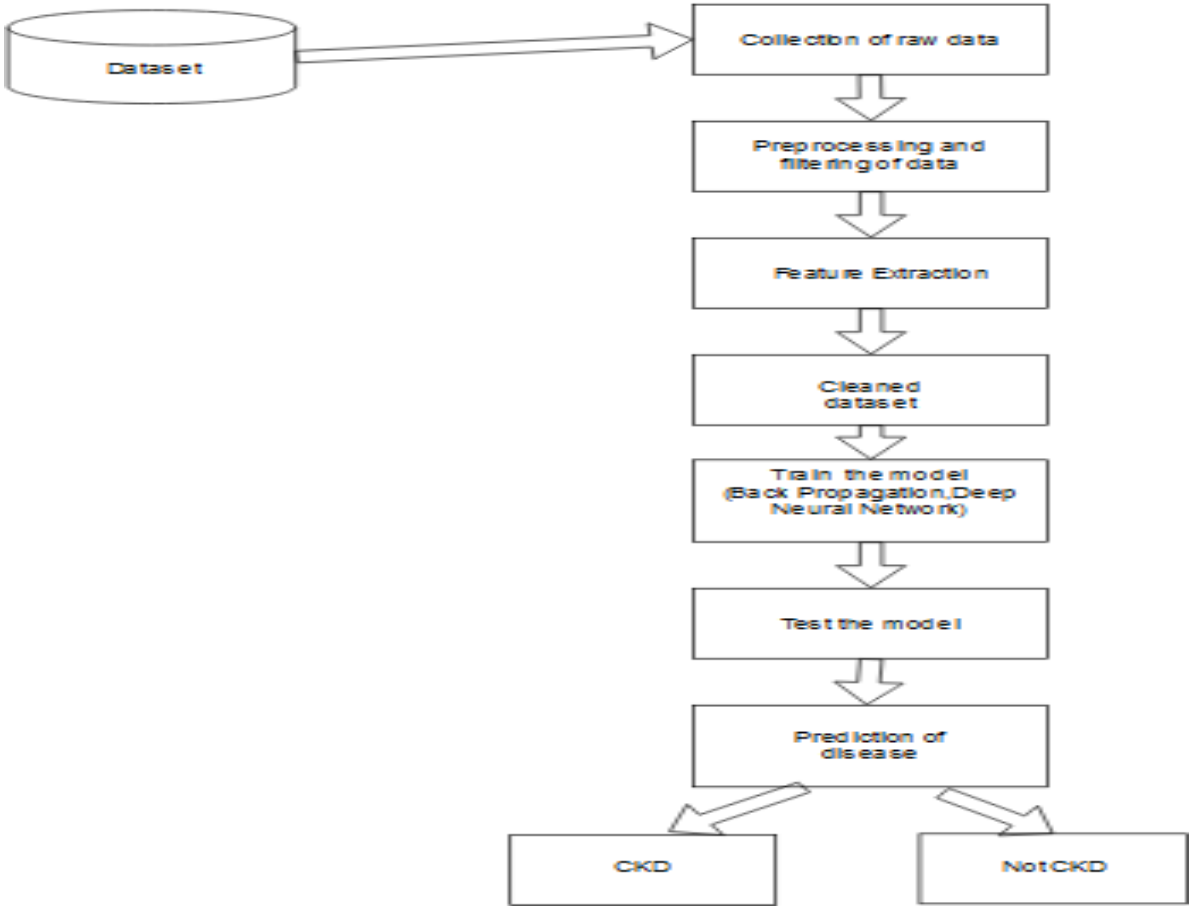

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interact with our application through webUser Interface.	HTML, CSS and Python flask.
2.	Registration	The user details will be stored and it will be usedfor 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 (DNN).

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 andCAPTCHA	Encryptions and Authentication
3.	Scalable Architecture	This model can be expanded to include more attributes for more accurate detection. Training themodel with even more attributes will increase the efficiency further.	Performance optimization
4.	Availability	It is used a website(UI) and trained model topredict , it will work at any time.	Web development
5.	Performance	By using DNN, we can predict the chronic kidneydisease with more than 95% of accuracy. In the DNN we have more hidden layers and hence its accuracy also high.	Deep Neural Network and backpropagation