TECHNOLOGY ARCHITECTURE

Date : 15 Nov 2022

Project Name : Early Detection Of Chronic Kidney Disease Using Machine Learning

Team ID : PNT2022TMID20701

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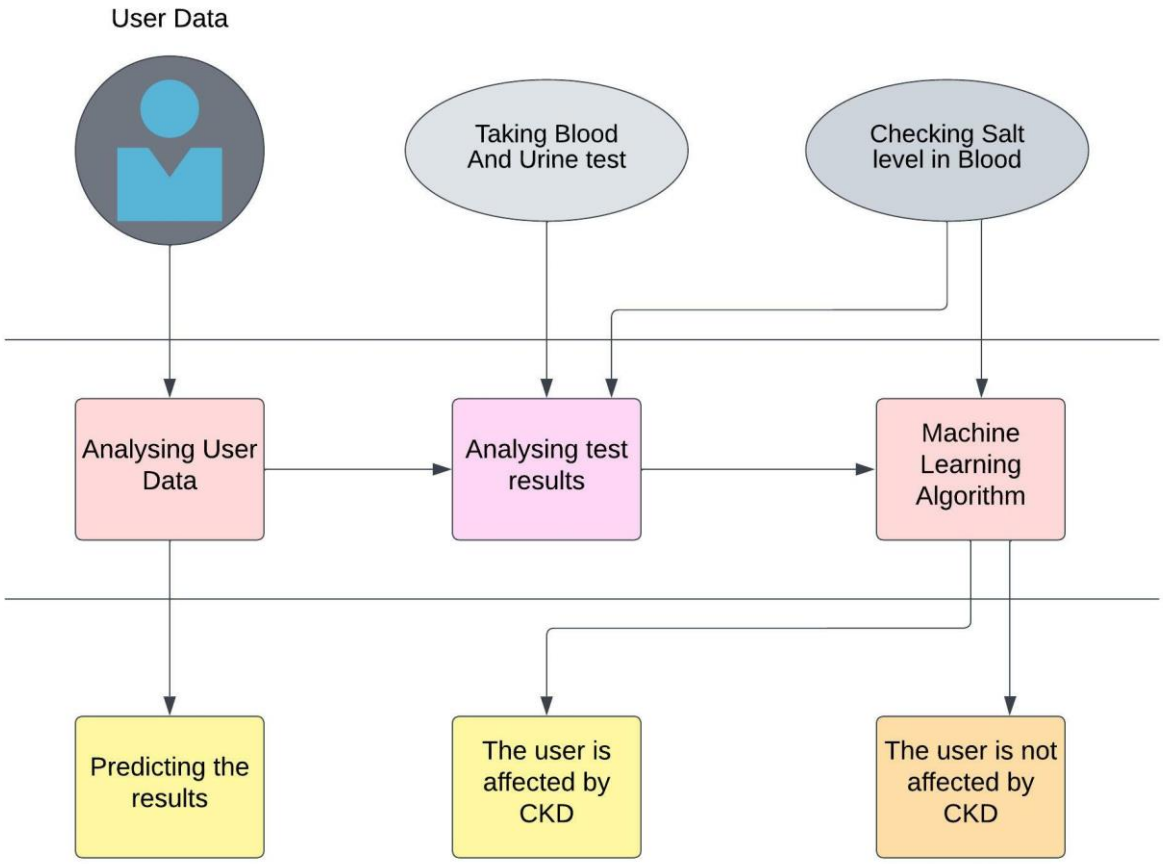
Technical Architecture:



Components & Technologies:

Sl. No	Component	Description	Technology
1.	User Interface	How the user interacts with the application	HTML, CSS, JavaScript
2.	Data preprocessing	Cleaning the data set(Handling the missing values).	Python
3.	Splitting the data	Splitting the dataset into train and test data	Python
4.	Test the model	Testing the model using test data	Python
5.	Evaluation	Evaluating the built model(accuracy, confusion matrix)	Python
6.	Machine Learning Model	The ML model takes the input parameter given by the user and predict the result	IBM Watson Machine Learning service
7.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	IBM Watson services(Cloud object storage service, Watson studio, machine learning)

Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Flask micro web framework used for developing web application
2.	Scalable Architecture	The website should be able to handle influx or reduced traffic at any given point	SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Availability	The application can be accessed by users with an internet connection from anywhere at any time.	IBM Cloud
4.	Performance	Multiple users should be able to access the application at the same time	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used