PROJECT DESIGN PHASE-II

TECHNOLOGY STACK (ARCHITECTURE & STACK)

Date	08th November 2022
Team ID	PNT2022TMID04262
Project Name	Early Detection of Chronic Kidney Disease Using Machine Learning
Maximum Marks	2 Marks

Technical Architecture:

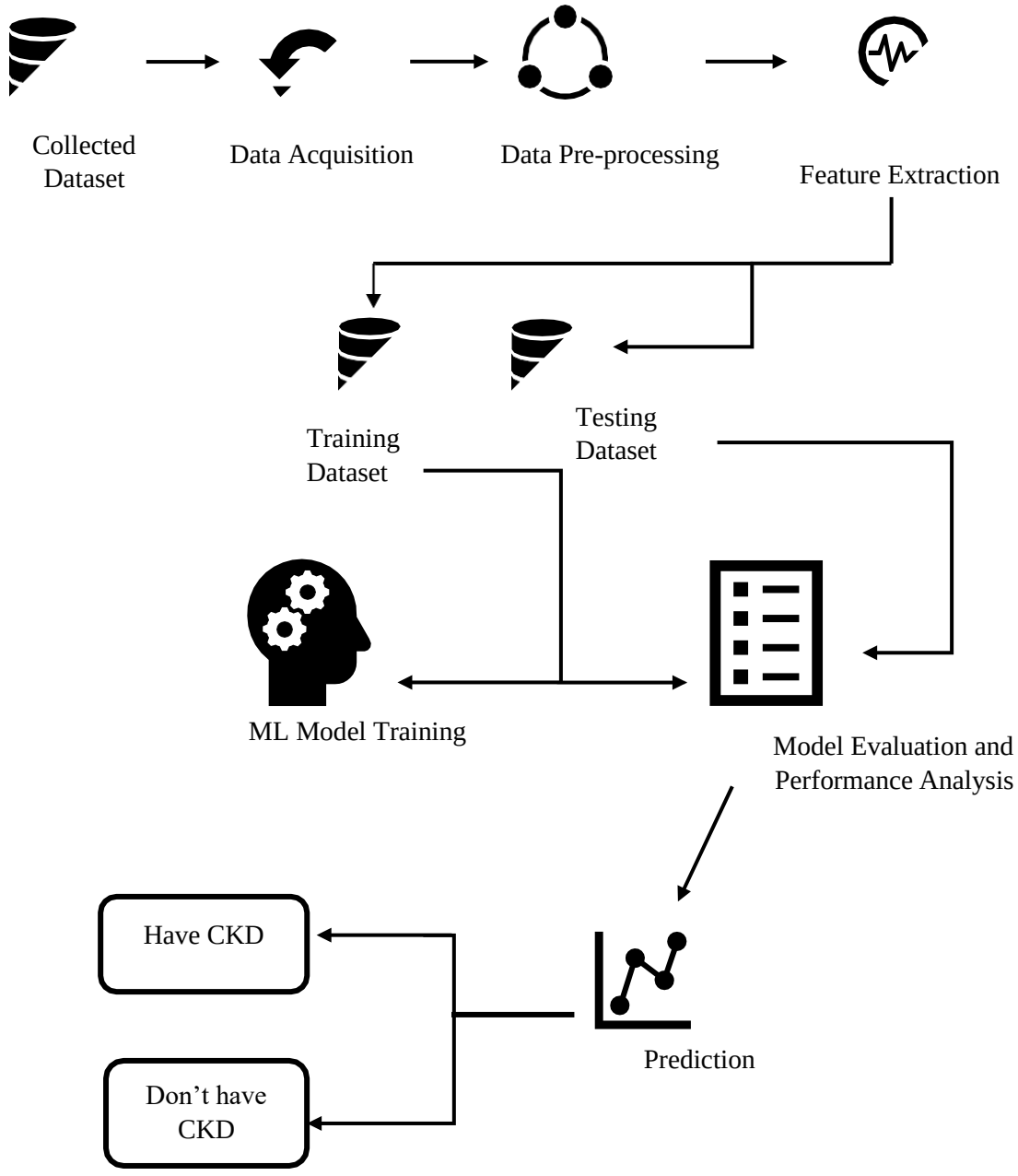

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	User interacts by using web user interface.	HTML, CSS and Python Flask
2.	Application Logic-1 (Login)	User can able to login if that person is already registered to the site.	HTML, CSS and Python Flask
3.	Application Logic-2 (Register)	User needs to be registered if that person is new to the site.	HTML, CSS and Python Flask.
4.	Application Logic-3(Reporting Form)	User needs to click on the reporting form in order to get the prediction result	Front end- HTML, CSS and Python Flask. Back end – Query Languages, Python.
5.	Database	Data Type-String, Numeral values.	Query Languages such as MySQL, NoSQL etc.
6.	Cloud Database	Database Service on Cloud.	IBM DB2, IBM Cloud ant etc.
7.	File Storage	File storage requirements.	Local Filesystem.
8.	External API-1	Anyone can access the details with some restrictions to the personal details of other users.	Web API.
9.	External API-2	Accessibility.	Aadhar API.
10.	Machine Learning Model	Predict the result based on the training and testing dataset.	Data Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System.	Local System.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Frameworks are used for predictive data analysis, providing clear and actionable error messages.	Tensor flow, Scikit learn, Keras.
2.	Security Implementations	OTP will be sent to the registered email id. Unauthorized users could not access the user's details.	Email Verification.
3.	Scalable Architecture	Scalability is improved for implementing the three-tier architecture.	Three tier architecture.
4.	Availability	For enhancing the high availability, load balancer is needed.	Load Balancer.
5.	Performance	The model could be able to process large number of datasets.	Load Balancer.