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

Date	18 October 2022
Team ID	PNT2022TMID32832
Project Name	Project - Detecting Parkinson's Disease using Machine Learning.
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2.

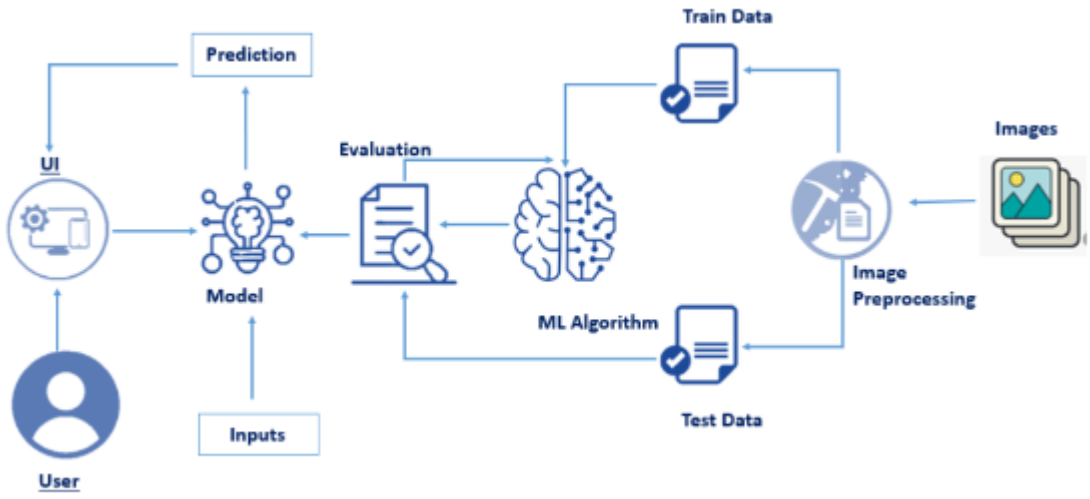

Table-1: Application Components:

S.No	Component	Description	Technology
1.	User Interface	How the user interacts with the application	HTML, CSS, Python flask.
2.	Application Logic-1	Register and Login page	HTML, CSS, Python flask.
3.	Application Logic-2	Image quantification	Histogram of Gradients
4.	Application Logic-3	Classification	Random Forest classifier
5.	Database	Data Type, Configurations, etc.	MySQL.
6.	Cloud Database	Database Service on Cloud	IBM DB2,IBM Cloudant
7.	File Storage	File Storage requirements	IBM Cloud Object Storage
8.	Machine learning model	Purpose of machine learning model	Prediction of Parkinson's disease
9.	Training and testing data	Purpose of training and testing data	Usage of Random forest classifier
10.	Accuracy	Accuracy of the model	Predict log probability function
11.	Infrastructure (Server / Cloud)	Cloud Local Server Configuration	Local System.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python Flask
2.	Security Implementations	List all the security/access controls implemented, use of firewalls, etc.	Built-in encryption for authorized users
3.	Scalable Architecture	If many datasets are uploaded it can be used in a more effective manner	Random forest classifier
4.	Availability	The web application is available 24*7 if there is uninterrupted internet	IBM Load Balancer
5.	Performance	Random forest classifier and predict log probability function is used for high accuracy	Random forest and Predict log probability function