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

Date	03 October 2022
Team ID	PNT2022TMID48809
Project Name	Detecting Parkinsons disease using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

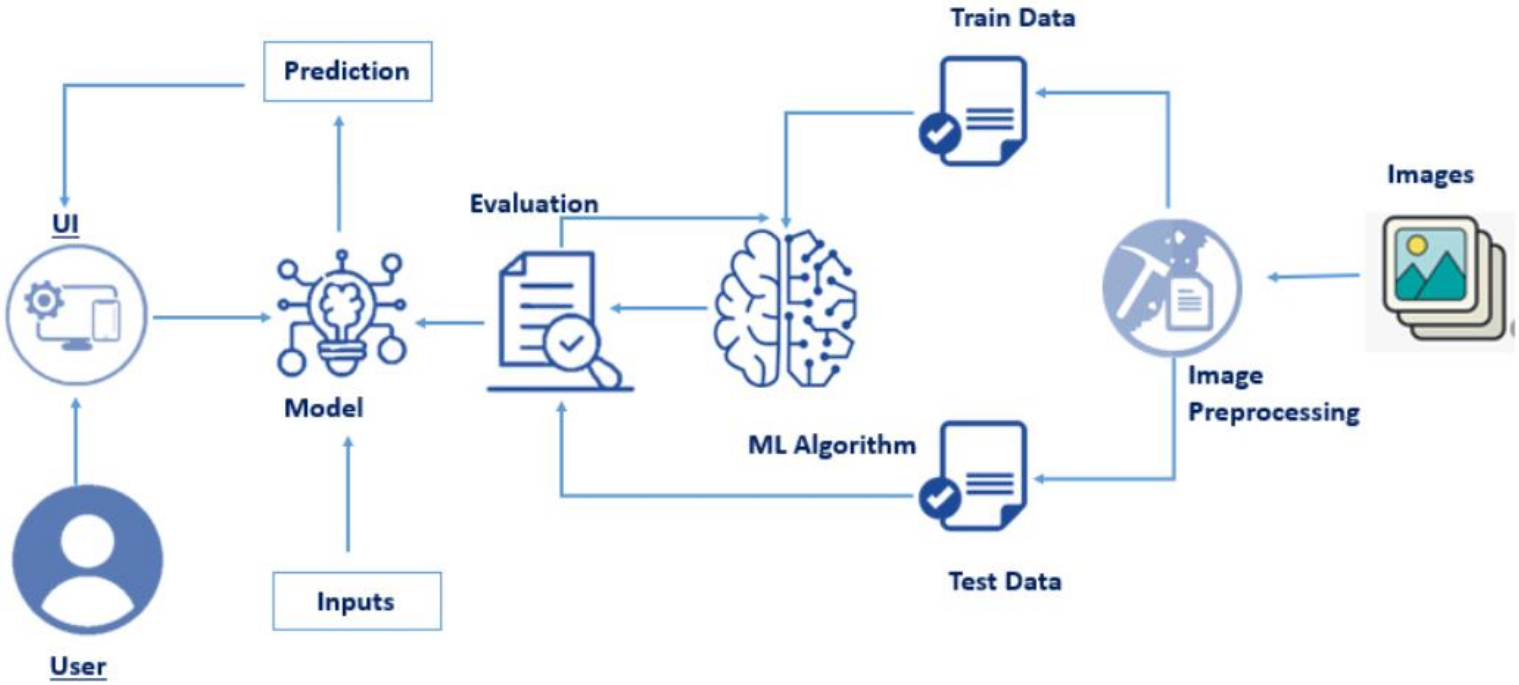

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The User Interact the service using web User Interface.	HTML, CSS, JavaScript.
2.	User Upload	Patient or a doctor hand drawn image to the web.	JavaScript.
3.	Parkinson Predication	The AI model classify the image.	Python.
4.	Data Analysis	The data set is analysis and preprocessed	Python, Computer Vision
5.	Machine Learning Model	Machine Learning Model diagnose the patient for Parkinson disease based on hand drawn spiral image.	CNN, Python, Computer Vision
6.	Model Architecture	It is a CNN Architecture trained by Backpropagation.	Python, Computer Vision
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: localhost:5000 Cloud Server Configuration : Deployed in IBM Cloud	IBM Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	For data analysis & model training open source frameworks are used.	Sklearn, numpy, pandas, tensorflow, keras.
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Micro service	Flask
4.	Availability	Deployed in the IBM cloud so 24/7	IBM Cloud
5.	Performance	The asynchrous functionality is used so many concurrent users can access	Flask, Asynchrous

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d