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

Date	13 October 2022
Team ID	PNT2022TMID08602
Project Name	Project - Fertilizers Recommendation System For Disease Prediction
Maximum Marks	4 Marks

Technical Architecture:

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

Title: Fertilizer Recommendation System For Disease Prediction

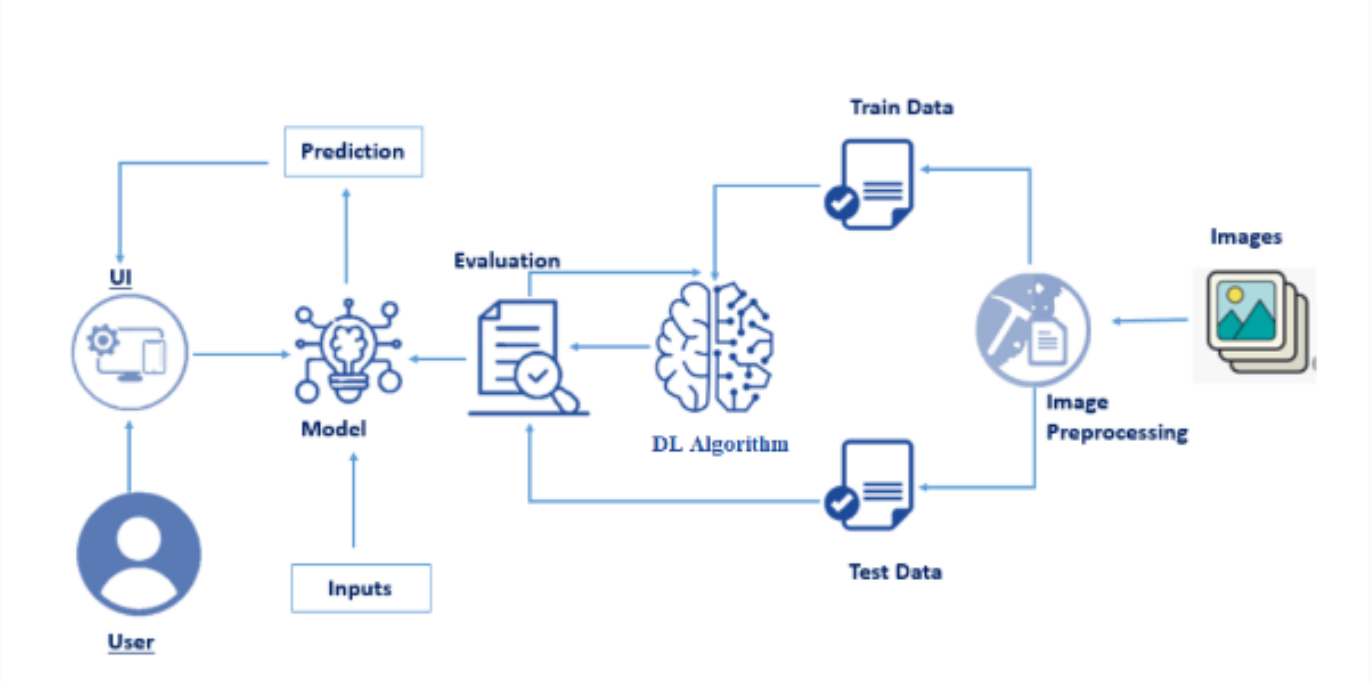

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The interface through which the user communicates with the system	HTML, CSS, JavaScript
2.	Image pre-processing	The images of diseased plant parts are captured and uploaded, which are then pre-processed for further predictions	Python
3.	Machine Learning Model	This models gets input from the user and displays the desired results, diseases, in this system	Python
4.	Database	Pre defined datasets and images of plants are stored	MySQL
5.	Cloud Database	Database Service on Cloud	Local Storage
6.	File Storage	It stores the trained and test data	Other Storage Service or Local Filesystem
7.	Algorithm	CNN is used to predict the diseases observed in the pictures	Convolutional Neural Networks (CNN)
8.	Predictions	Application will recommend fertilizer based on the predicted disease	Python

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Jupyter Notebook, Python Flask	Python, Local storage
2.	Scalable Architecture	Two tier architecture will be used. Client and Server	Python
3.	Availability	It is a user-friendly application and all the users can make use of it irrespective of time.	IBM Cloud
4.	Performance	The system will work efficiently for the large number of inputs and user scale size.	IBM Cloud