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

Date	28-10-2022
Team ID	PNT2022TMID27540
Project Name	Project - Fertilizers Recommendation System for Disease Prediction
Maximum Marks	4 Marks

Technical Architecture:

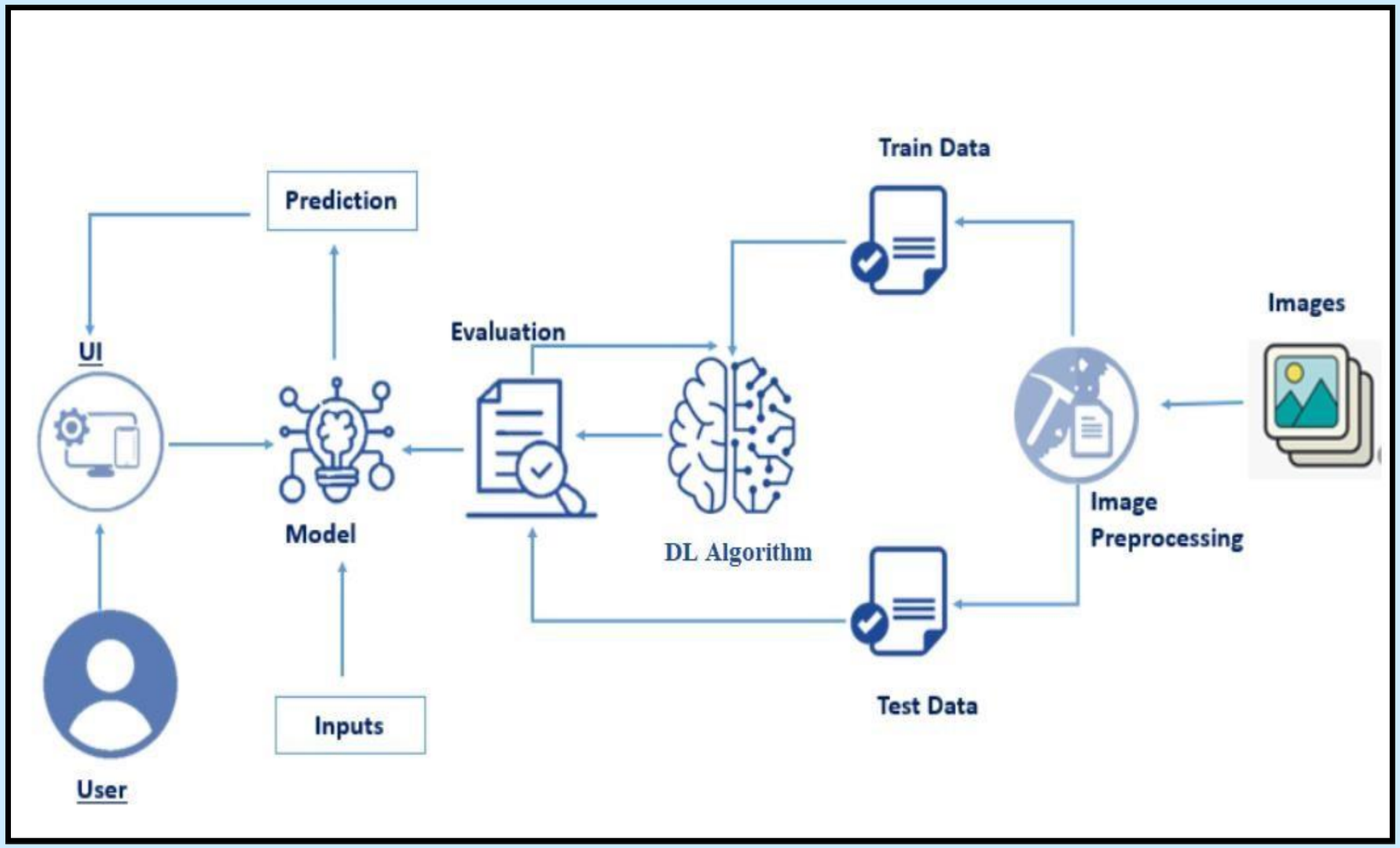

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	How the user interacts with application to depict the human computer interaction and communication.	HTML, CSS, JSP
2.	Application Logic-1	A page to upload images as an input.	Python
3.	Application Logic-2	To use the Machine Learning (ML) model and predict the result.	Python
4.	Database	Structured data-images	MySQL
5.	Cloud Database	Database that typically runs on a cloud computing platform and access to the database is provided as a service.	IBM Cloud Databases for MySQL
6.	File Storage	To store data in a hierarchical structure	Local File system
7.	Machine Learning Model	Here we use a Support Vector Machine Algorithm that is used widely in Classification and Regression problems	Random Forest, XG Boost

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask micro web framework	Written in Python. It is classified as a micro framework because it does not require particular tools or libraries. It has no database abstraction layer, form validation or other components where pre-existing third-party libraries provide common functions.
2.	Security Implementations	With all aspects of the job including detecting malicious attacks, analysing the network end point protection and vulnerability assessment, sign in encryption.	IBM Cloud App ID Services
3.	Availability	Available for all data sizes	-
4.	Performance	Can extend the storage according to our needs	Python, AngularJS