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

Date	29 October 2022
Team ID	PNT2022TMID10804
Project Name	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

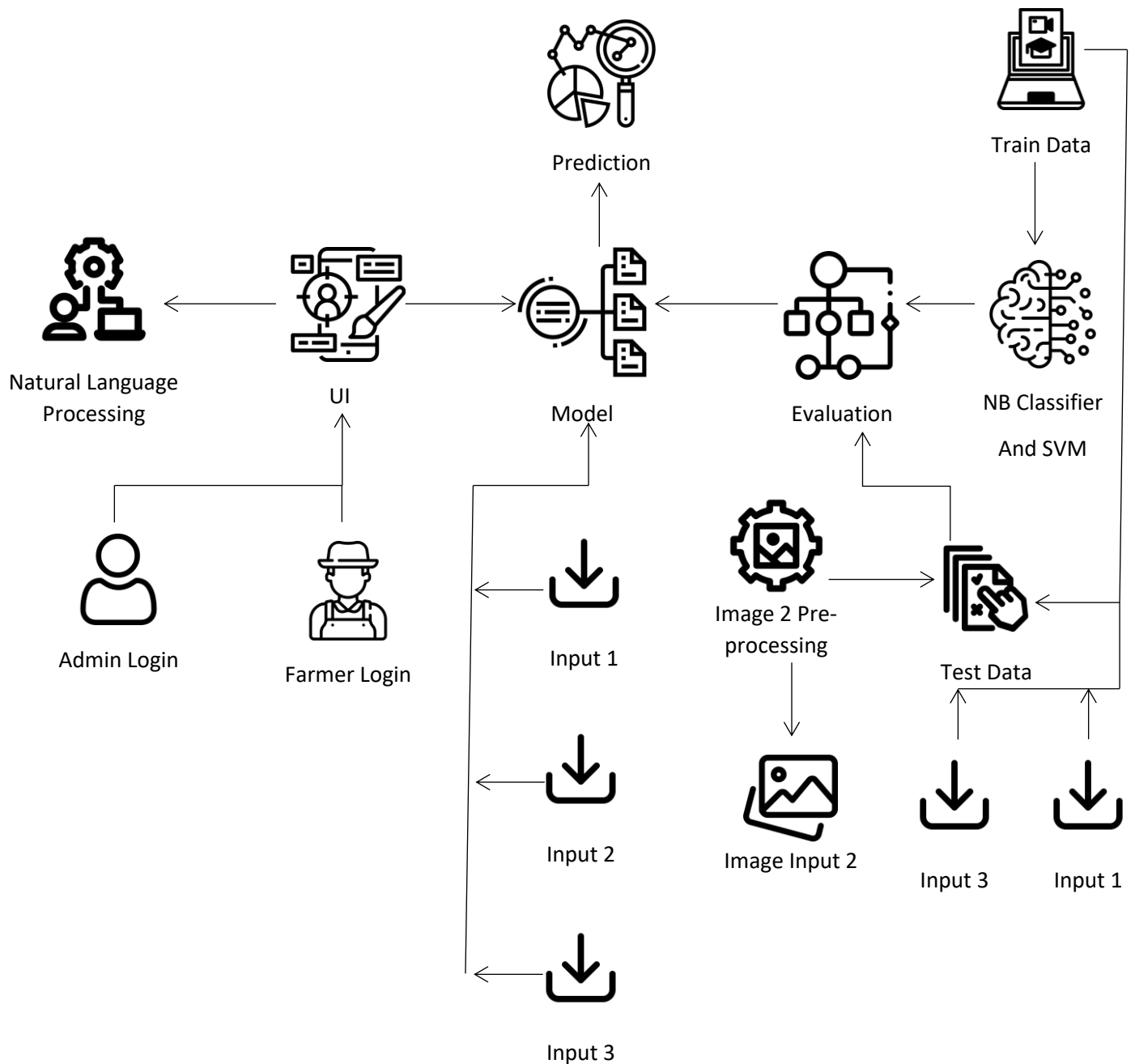**Technical Architecture Diagram:**

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Application development (eg Mobile app, Chat bot, Web UI).	CSS, HTML, JavaScript, React Js, etc.
2	Application logic	Logic for a process in the application	Python
3	Image processing	the steps taken to format images before they are used by model training and inference	Pytorch, Open CV, Keras, Tensor flow
4	Database	Enable developer to store data and then accessing it	MySQL
5	Cloud Database	Images that are stored in the database	IBM Data base
6	File Storage	File storage	IBM Cloud
7	Machine Learning Model	Support Vector Machine Algorithm that is used widely in Classification and Regression problems.	Random Forest ,XG Boost
8	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry

Table-2: Application Characteristics :

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	List the open-source frameworks used	Flask, Tensor flow.
2	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	SHA-256, OWASP
3	Scalable Architecture	Justify the scalability of architecture	Micro-services
4	Availability	Justify the availability of application	Load balancers
5	Performance	Design consideration for the performance of the application.	Use of Cache