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

Date	**29 October 2022**
Team ID	**PNT2022TMID26231**
Project Name	**Fertilizers Recommendation System for Disease Prediction**
Maximum Marks	**4 Marks**

Technical Architecture:

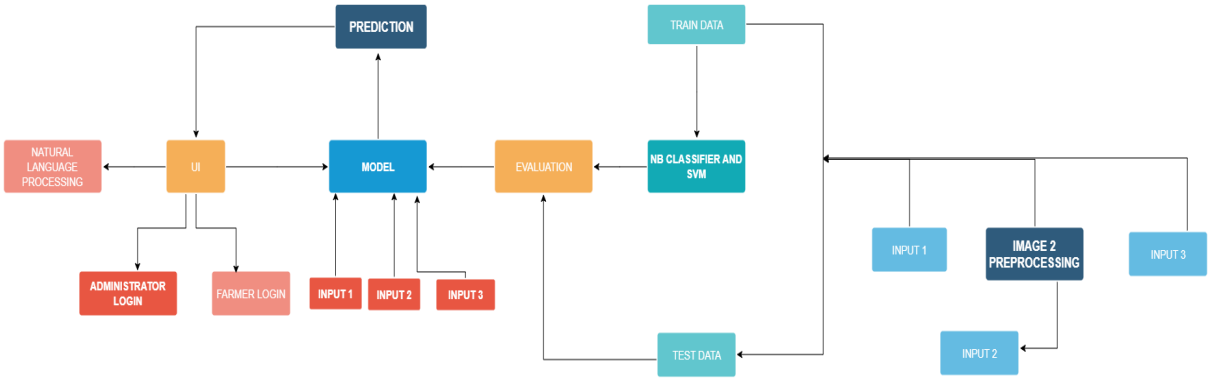

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	A page to upload images as input	Python
3.	Application Logic-2	To use the Machine Learning model and predicting The result.	IBM Watson STT service
4.	Database	Structured data – images	MySQL, NoSQL, etc.
5.	Cloud Database	Database that typically runs on a cloud computing platform and access to the database is providing as a service	IBM DB2, IBM Cloudant etc.

6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	Machine Learning Model	Here, we use a Support Vector Machine Algorithm that is used widely 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 any other components where the third party libraries provide common functions.
2.	Security Implementations	With all aspects of the job including detecting malicious attacks, analyzing the network endpoint and vulnerability assessment, Sign in encryption.	IBM Cloud App ID Services
3.	Availability	Available for all data size	-
4.	Performance	Can extend the storage according to our needs.	Python, AngularJS.