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

Date	21 October 2022
Team ID	PNT2022TMIDxxxxxx
Project Name	Fertilizer Recommendation System For Disease Prediction
Maximum Marks	4 Marks

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/

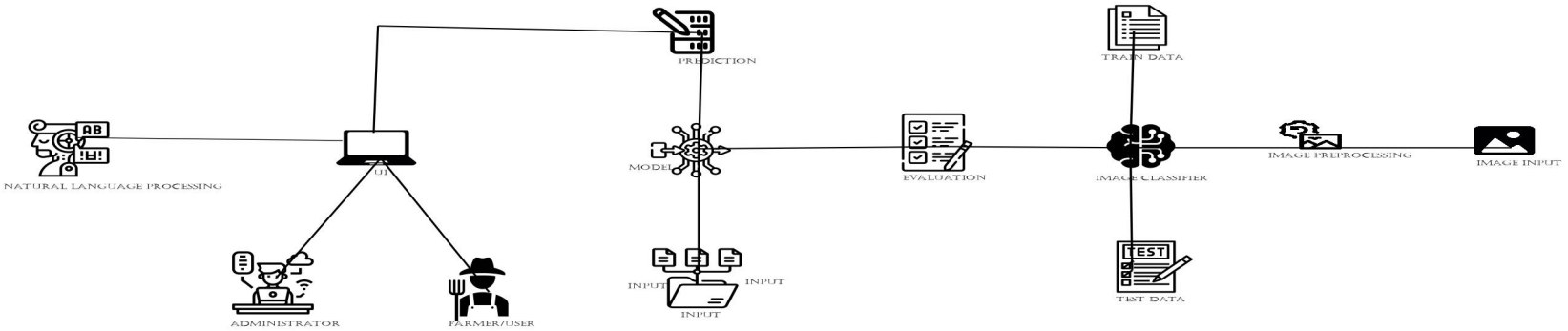

Table-1 : Components & Technologies:

S.No	Component	Description	Technology

1.	User Interface	How user interacts with application –Web Application	HTML, CSS, FLASK
2.	Application Logic-1	A Page to Upload Images as Input	Python
3.	Application Logic-2	To use AI Model and Algorithm for Prediction Suitable Fertilizer	Python
4.	Database	Structured Trained data images	MySQL.
5.	Cloud Database	Database that runs on cloud platform and can be accessed from anywhere.	IBM Cloud
6.	File Storage	To Store data in hierarchical structure	Local File system ,IBM DB
7.	Machine Learning Model	We use Support Vector Machine (SVM) Algorithm for image classification.	Object Recognition Model,SVM,XG Boost
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python web development framework is Open Source that embeds its own multi-hung server. It can run on any working framework that supports Python.	Python, Flask Application
2.	Security Implementations	With regard to all facets of the job, such as identifying malicious assaults, network analysis, endpoint security and vulnerability testing, and sign-in encryption.	IBM Cloud App ID Services
3.	Availability	Available for all data size	load balancers,

4.	Performance	Can extend the storage according to our needs number of requests per sec	Python, Angular JS

References:

https://www.lucidchart.com/blog/how-to-draw-architectural-diagrams

https://flask.palletsprojects.com/en/2.2.x/

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

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