

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

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| Date | 16 November 2022 |
| Team ID | PNT2022TMID36798 |
| Project Name | Fertilizers Recommendation System For Disease Prediction |
| Maximum Marks | 4 Marks |

Technical Architecture:

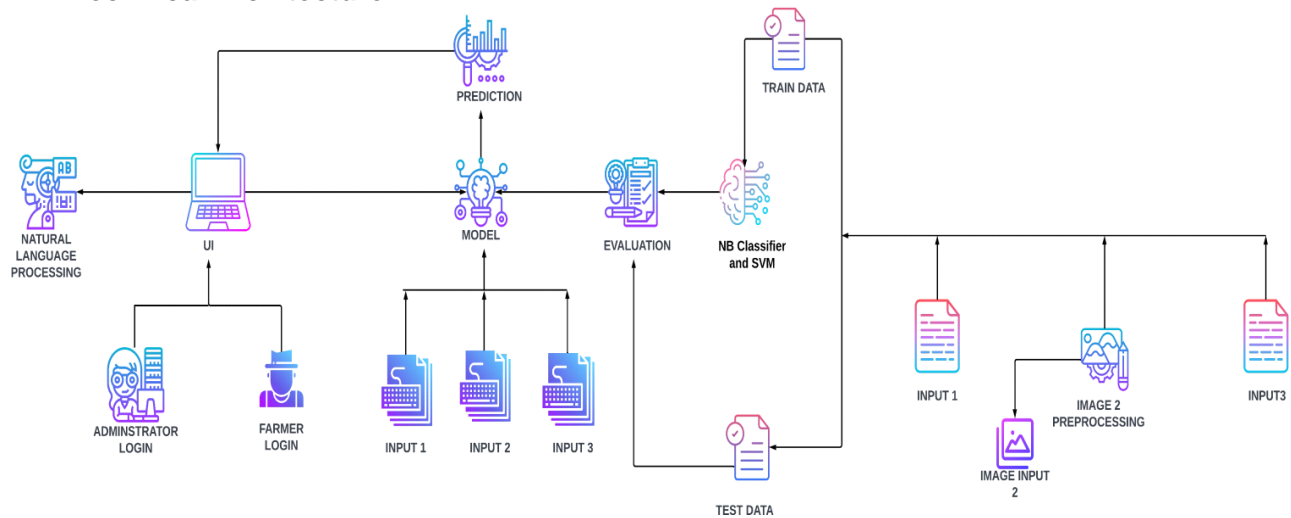


Table-1 : Components & Technologies

| S.N o | Component | Description | Technology | |
|----------|---------------------|----------------------------------------------------------------------------------------------------------------|-------------------------|--|
| 1. | User Interface | How the user interacts with the application .To depict the human-computer interaction and communication. | HTML, CSS,JSP | |
| 2. | Application Logic-1 | A page to upload images as input | Python | |
| 3. | Application Logic-2 | To use the MachineLearning model and predicting the result | Python | |
| 4. | Database | Structured data-images | MySQL | |
| 5. | Cloud Database | Database that typically runs on a cloud computing platform and accessto 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 any other components where preexisting third-party libraries provide common functions. |
| 2. | Security Implementations | With all aspects of the job including detecting malicious attacks, analyzing the network endpoint protection and vulnerability assessment, Sign i encryption | IBM Cloud App ID Services |
| 3. | Availability | Available for all data size | - |