

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

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|---------------|--|
| Date          | 03 October 2022  |
| Team ID       | PNT2022TMID44619   |
| Project Name  | Project – Fertilizers Recommendation System for Disease Prediction |
| Maximum Marks | 4 Marks  |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task)   |
|--------|-------------------------------|--|
| FR-1   | User Registration             | Registration through Form<br>Registration through Gmail  |
| FR-2   | User Confirmation             | Confirmation via Email<br>Confirmation via OTP   |
| FR-3   | Capturing image               | Capture the image of the leaf and check the parameter of the captured image.   |
| FR-4   | Image processing              | Upload the image for the prediction of the disease in the Leaf.  |
| FR-5   | identification                | The system will predict the issue from User details through train set and test data.<br>Identify the leaf and predict the disease in leaf. |
| FR-6   | Suggestion and Prevention     | The system will suggest the solution to the issue through image or description.  |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description   |
|--------|----------------------------|---|
| NFR-1  | <b>Usability</b>           | The system is highly user friendly as the User can provide details and get suggestions from wherever they are.<br>User can easily provide the details of their crop issue and get prevention methods and detects if the crop is affected by diseases. |
| NFR-2  | <b>Security</b>            | These securities are mainly related to the cloud services, they have strict security across the network.<br>The information belongs to the user and leaf are secured highly.  |
| NFR-3  | <b>Reliability</b>         | The use of artificial intelligence gives appropriate result.<br>The CNN algorithm model has 95% accuracy.<br>The reliability is more stable in all environment.   |

|       |                     |   |
|-------|---------------------|---|
| NFR-4 | <b>Performance</b>  | Response Time and Net Processing Time is Fast.<br>It is to support maximum number of users in a network.                                |
| NFR-5 | <b>Availability</b> | There is a high availability for user's access.<br>It is available for all user to predict the disease in the plant                     |
| NFR-6 | <b>Scalability</b>  | The website is scalable.<br>Increasing the prediction of the disease in the leaf.<br>Automatically adjust to fit multiple screen sizes. |