**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 22 June 2025 |
| Team ID | LTVIP2025TMID40098 |
| Project Name | Pollen's Profiling: Automated Classification of Pollen Grains |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| **FR No.** | **Non-Functional Requirement** | **Description** |
| --- | --- | --- |
| NFR-1 | **Usability** | The system should have a clean, intuitive UI for users to easily upload images and view results without technical expertise. |
| NFR-2 | **Security** | The system should protect user data (images, login info) using encryption and secure authentication methods. |
| NFR-3 | **Reliability** | The system should consistently provide accurate predictions with minimal failure or downtime during usage. |
| NFR-4 | **Performance** | The prediction response time should be under 2 seconds for a single image classification. |
| NFR-5 | **Availability** | The system should be available 24/7 with minimal service interruptions. |
| NFR-6 | **Scalability** | The solution should handle increasing users or image inputs by scaling the model inference service and storage infrastructure as needed. |

| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| --- | --- | --- |
| FR-1 | User Account Management | Register using email and password |
|  |  | Login to the system |
| FR-2 | Profile Management | Update user profile details (name, contact info) |
| FR-3 | Produce Image Input | Upload multiple images for batch analysis |
| FR-4 | Pollen Grains Predictions | Classify produce into categories |