**Project Design Phase-II**

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

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| --- | --- |
| Date | 25 june 2025 |
| Team ID | LTVIP2025TMID45798 |
| Project Name | Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| --- | --- | --- |
| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Image Upload & Prediction | |  | | --- | | Upload image from device |  |  |  |  | | --- | --- | --- | |  |  | View prediction results | |
| FR-2 | User Interface | |  | | --- | | Home Page with Hero Section |  |  |  |  | | --- | --- | --- | |  |  | Predict Page with upload feature |  |  |  |  | | --- | --- | --- | |  |  | About Page | |
| FR-3 | Model Inference | |  | | --- | | Load trained model on server |  |  |  |  | | --- | --- | --- | |  |  | Process uploaded image |  |  |  |  | | --- | --- | --- | |  |  | Return predicted class label | |
| FR-4 | Result Display | |  | | --- | | Show predicted label under image |  |  |  |  | | --- | --- | --- | |  |  | Hide upload form after prediction | |
| FR-5 | Feedback (Future Scope) | Allow user to submit feedback |
| FR-6 | Deployment | Deploy using Flask on localhost/cloud |

**Non-functional Requirements:**

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

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| --- | --- | --- |
| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | Simple, clean UI for users to upload and predict |
| NFR-2 | **Security** | Handle file uploads securely, limit file types |
| NFR-3 | **Reliability** | Consistent prediction results across test cases |
| NFR-4 | **Performance** | Predict within 5 seconds per image |
| NFR-5 | **Availability** | System should be available 95% of the time |
| NFR-6 | **Scalability** | Able to add more classes in the future |