**Project Design Phase-II**

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

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| Date | 28 June 2025 |
| Team ID | LTVIP2025TMID41140 |
| 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.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
| --- | --- | --- |
| FR-1 | Image Upload | Upload image of fruit or vegetable |
| FR-2 | Classification | Predict healthy or rotten using trained model (VGG16) |
| FR-2 | Classification | Display confidence score |
| FR-2 | Classification | Show recommendation: “Good to Eat” or “Don’t Eat” |
| FR-3 | Feedback System | Feedback form after result display |
| FR-3 | Feedback System | Save feedback as JSON for admin analysis |
| FR-4 | Admin/Support Functions | Review feedback |
| FR-4 | Admin/Support Functions | Trigger model retraining with new dataset |
| FR-4 | Admin/Support Functions | Monitor model performance metrics |

**Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description |
| --- | --- | --- |
| NFR-1 | Usability | The web interface should be simple and intuitive for non-technical users. |
| NFR-2 | Security | Uploaded images and feedback data should be securely stored. |
| NFR-3 | Reliability | The system must consistently return correct predictions under expected loads. |
| NFR-4 | Performance | Prediction response time should be under 2 seconds for most inputs. |
| NFR-5 | Availability | The web application should maintain 99% uptime during demonstration or access. |
| NFR-6 | Scalability | The system should support future integration with a mobile app or camera input. |