**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 31 January 2025 |
| Team ID | LTVIP2025TMID35471 |
| Project Name | Smart Sorting: Transfer Learning for Identifying Rotten Fruits and Vegetables |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

* Preprocessing Pipeline: Image resizing, normalization, batching
* ML Inference: Fine-tuned VGG16 model classifying fresh vs. rotten
* Alert Module: WebSocket service pushing notifications to control panels/mobile apps
* Data Storage: Encrypted database for storing images, predictions, logs
* Analytics Dashboard: Visualization of spoilage trends, system health metrics
* Update Service: Backend for model retraining and deployment via CI/CD
* Edge Layer: High-resolution cameras, Raspberry Pi/Jetson for on-device inference



