

## Project Design Phase-II Technology Stack (Architecture & Stack)

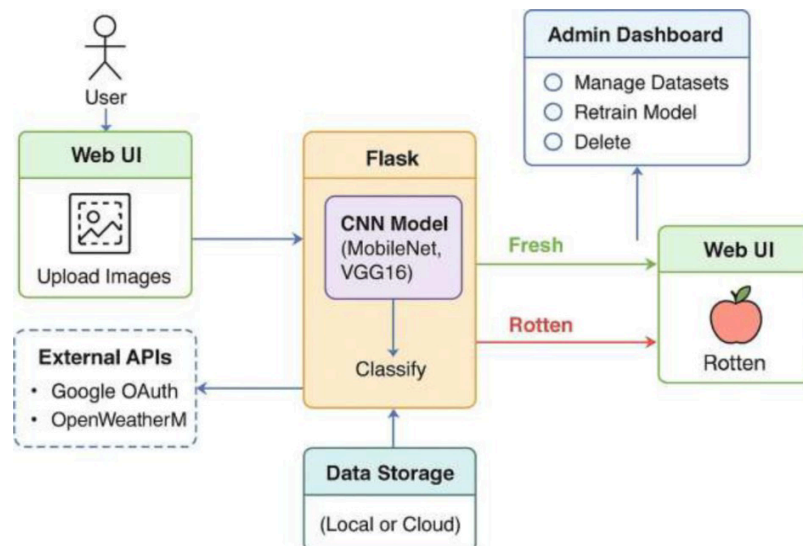
Date	18 February 2026
Team ID	LTVIP2026TMIDS24412
Project Name	Smart Sorting: Transfer learning for identifying rotten fruits and vegetables
Maximum Marks	4 Marks

### Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

### Example: Order processing during pandemics for offline mode

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>



**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	Programming Language	Core development and model implementation	Python
2.	Deep Learning Framework	Model building and training	Tensorflow/Keras
3.	Pre-trained Model	Transfer learning for image classification	MobileNetV2
4.	Data Processing	Image array handling and numerical operations	Numpy
5.	Model Evaluation	Confusion matrix and classification report	Scikit-learn
6.	Visualization	Performance visualization	Matplotlib, Seaborn
7.	Backend Framework	Web application backend	Flask
8.	Frontend	User interface	HTML, CSS
9.	Development Friendly	Project development and execution	Anaconda, VS Code

**Table-2: Application Characteristics:**

S.No	Characteristics	Description
1.	Accuracy	High classification accuracy using transfer learning
2.	Automation	Automatically detects fresh vs rotten fruits
3.	User-Friendly	Simple image upload interface
4.	Scalability	Can be extended to more fruit categories
5.	Efficiency	Reduces manual sorting effort

S.No	Characteristics	Description
6.	Real-Time Capability	Provides instant prediction results
7.	Reliability	Consistent output without human error

**References:**

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>