Technology Stack

Date	29 June 2025
Team ID	LTVIP2025TMID41462
Project Name	Smart Sorting : Transfer Learning For Identifying Rotten Fruits And Vegetables
Maximum Marks	

Technology Stack:

Category	Technology / Tool	Purpose
Programming Language	Python	Core programming for model training and Flask backend
Deep Learning Framework	TensorFlow / Keras	Building and training the CNN classification model
Pre-trained Model	MobileNetV2	Transfer learning for fast and accurate image classification
Data Handling	NumPy, Pandas	Data preprocessing and handling
Image Processing	Pillow, OpenCV (optional)	Reading and manipulating images
Web Framework	Flask	Backend web server to serve predictions
Frontend	HTML5, CSS3	User interface for uploading images
Dataset Source	Kaggle Dataset: Fresh and Stale Fruits & Vegetables	Training and testing the classification model
Deployment Platform (optional)	PythonAnywhere / Render / Localhost	Hosting the Flask web app
Model Format	`.h5` (HDF5)	Saving the trained Keras model
IDE / Notebook	Google Colab	Training and evaluating the model in a cloud environment
Version Control	Git + GitHub	Project management and submission
Visualization	Matplotlib	Optional: Plotting training and validation accuracy/loss