Model Development Phase Template

Date	20 November 2025
Team ID	739946
Project Title	Deepfruitveg:Automated Fruit And Vegetables Identification
Maximum Marks	5 Marks

Model Selection Report

The **Deepfruitveg** model selection report evaluates various machine learning models for fruit and vegetable identification, comparing accuracy, performance, and suitability based on dataset size, complexity, and real-time requirements.

Model Selection Report:

Model	Description
Convolutional Neural Network (CNN)	A deep learning model designed to automatically classify and identify fruits and vegetables from images based on their features.
ResNet (Residual Network)	A CNN variant that addresses vanishing gradient problems, enabling deeper networks for more accurate fruit/vegetable identification.
InceptionV3	A deep learning architecture known for its efficiency and accuracy in image recognition, suitable for multi-class fruit/vegetable identification.

MobileNet	A lightweight neural network optimized for mobile and embedded devices, offering fast and accurate fruit/vegetable identification.
Transfer Learning (VGG16, AlexNet)	Utilizes pre-trained models on large datasets and fine-tunes them for the specific task of fruit/vegetable classification, improving efficiency and accuracy.
YOLO (You Only Look Once)	A real-time object detection model that can simultaneously classify and locate fruits/vegetables in images, suitable for quick identification tasks.