Model Development Phase Template

Date	20 November 2025
Team ID	740018
Project Title	Deepfruitveg:Automated Fruit And Vegetables Identification
Maximum Marks	5 Marks

Feature Selection Report Template

The Feature Selection Report for Deepfruitveg identifies relevant features for fruit/vegetable identification, using techniques like PCA, filter methods, and embedded methods, optimizing model performance while reducing complexity and training time.

Feature	Description	Selected (Yes/No)	Reasoning
Color Histogram	Represents the color distribution of the fruit/vegetable	Yes	Key feature for distinguishing between different types of fruits and vegetables based on color.
Texture (Haralick features)	Measures texture patterns like smoothness or roughness	Yes	Provides important information for differentiating fruits and vegetables with similar colors.
Shape Descriptors	Defines the shape characteristics (e.g., roundness)	Yes	Crucial for identifying fruits/vegetables with distinct shapes, like apples or cucumbers.

Size (Dimensions)	The size of the fruit/vegetable in terms of width/height	No	Less relevant compared to color, texture, and shape features for fruit/vegetable classification.
Edge Detection Features	Identifies the boundaries of the object in images	No	Redundant with texture and shape features, not adding significant value to the classification.
Ripeness Level	Estimates the ripeness from image characteristics	Yes	Important for identifying fruits/vegetables in different stages of ripeness for accurate classification.