

Model Development Phase Template

Date	4 July 2025
TeamID	SWTID1750180871
Project Title	Mangonet: A Vgg16-Based Neural Network For Mango Classification
Maximum Marks	5 Marks

Feature Selection Report :

Feature	Description	Selected (Yes/No)	Reasoning
Image Pixels	Raw pixel values (RGB) from the mango images.	Yes	Primary input used by CNN for learning features like shape, color, and texture.
Image Size (224x224)	Resized fixed dimension for all images.	Yes	Ensures consistency in input size across the dataset.
Image Color Channels	Red, Green, and Blue (RGB) channels.	Yes	Required to capture color differences between mango varieties.
Class Labels (Folders)	Labels derived from image folder names.	Yes	Necessary for supervised learning and model evaluation.
Augmented Images	Synthetic samples created via rotation, zooming, flipping, etc.	Yes	Balances class distribution and improves generalization.
Image Format (JPG/PNG)	Image format used in the dataset.	Yes	Required to maintain compatibility with image loaders.
Image Metadata (EXIF)	Camera-related metadata like focal length, device info.	No	Not used in model training or classification.

File Name / ID	Image file name (like mango1.jpg).	No	Not a predictive feature; only used for identification.
Image Brightness Range	Statistical brightness distribution across the dataset.	Yes	Used during preprocessing to normalize input brightness.
Pixel Normalization	Rescaling pixel values to [0,1] during preprocessing.	Yes	Prevents large numerical values from skewing learning.