

Model Development Phase Template

Date	25 June 2025
Team ID	SWTID1749974387
Project Title	Neural Networks Ahoy: Cutting-edge Ship Classification for Maritime Mastery
Maximum Marks	5 Marks

Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
image	Filename of the ship image	Yes	This is used to locate and load the corresponding ship image for model training.
category	Numerical label representing ship type (1–5)	Yes	This is the primary label used for supervised classification.
class_name	Human-readable class name (e.g., Cargo, Tanker)	No	Redundant for training — used only for interpretation and visualization.

Image Pixels	Pixel data extracted from ship images	Yes	Fundamental feature for deep learning model input.
Image Size	Dimensions of each image	Yes	Images are resized to a standard size during preprocessing.
Data Augmentation	Transformed versions of the same image (flip, rotation, zoom, etc.)	Yes	Improves model generalization by synthetically increasing dataset diversity.
RGB Channels	Red, Green, Blue channels of image data	Yes	Standard input for image models; each color channel contributes uniquely to recognition.