

## Model Development Phase

Date	20 June 2025
Team ID	SWTID1749826875
Project Title	Dog Breed Identification using Transfer Learning
Maximum Marks	5 Marks

### Model Selection Report

In the model selection report for future deep learning and computer vision projects, various architectures, such as CNNs or RNNs, will be evaluated. Factors such as performance, complexity, and computational requirements will be considered to determine the most suitable model for the task at hand.

### Model Selection Report:

Model	Description
VGG19	VGG19 is a deep CNN with 19 layers, pre-trained on ImageNet. It performs well for image classification tasks and can capture detailed spatial features. However, due to its large size and high number of parameters, it can be slow to train and prone to overfitting on smaller datasets.
MobileNetV2	MobileNetV2 is a lightweight model designed for mobile and low-resource environments. It uses depth-wise separable convolutions and performs well even with limited data. Its smaller size makes it faster to train and less prone to overfitting,
EfficientNetB0	Balances performance and efficiency using a compound scaling method. Offers better accuracy and lower computational cost compared to VGG19 and MobileNetV2. Suitable for most tasks, especially when both accuracy and speed are important.