Model Development Phase Template

Date	17th June 2025
Team ID	SWTID1749740962
Project Title	Dog Breed Identification Using Transfer Learning
Maximum Marks	10 Marks

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include a summary and training and validation performance metrics for multiple models, presented through respective screenshots.

Initial Model Training Code (5 marks):

```
Image_size=(224, 224, 3)
# The first two values, 224 and 224, represent the height and width of the image, respectively. This means the image has a resolution of 224 pixels in height and 224 pixels in width.
# The third value, 3, represents the number of color channels in the image. In this case, 3 indicates that the image is in RGB (Red, Green, Blue) color space.
#  Each pixel in the image is represented by three values corresponding to the intensity of red, green, and blue channels, respectively.
```

```
# *****************
vgg=VGG19(input_shape=Image_size, weights='imagenet', include_top=False)
```

```
Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/vgg19/vgg19_weights_tf_dim_ordering_tf_kernels_notop.h5
80134624/80134624 [==============================] - 4s 0us/step
```

Model Validation and Evaluation Report (5 marks):

Model	Summary	Training and Validation Performance Metrics
Model 1		

		
		

vgg.fit(generator, epochs=6)
Epoch 1/6
320/320 [==============================] - 54s 167ms/step - loss: 63.5954 - accuracy: 0.6852
Epoch 2/6
320/320 [==============================] - 52s 164ms/step - loss: 43.2252 - accuracy: 0.7862
Epoch 3/6
320/320 [==============================] - 53s 167ms/step - loss: 8.9471 - accuracy: 0.9271
Epoch 4/6
320/320 [==============================] - 53s 167ms/step - loss: 5.5761 - accuracy: 0.9639
Epoch 5/6
320/320 [==============================] - 52s 164ms/step - loss: 0.7984 - accuracy: 0.9918
Epoch 6/6
320/320 [==============================] - 53s 166ms/step - loss: 0.7158 - accuracy: 0.9959
<keras.src.callbacks.History at 0x7934977502d0>
print(vgg.output.shape)