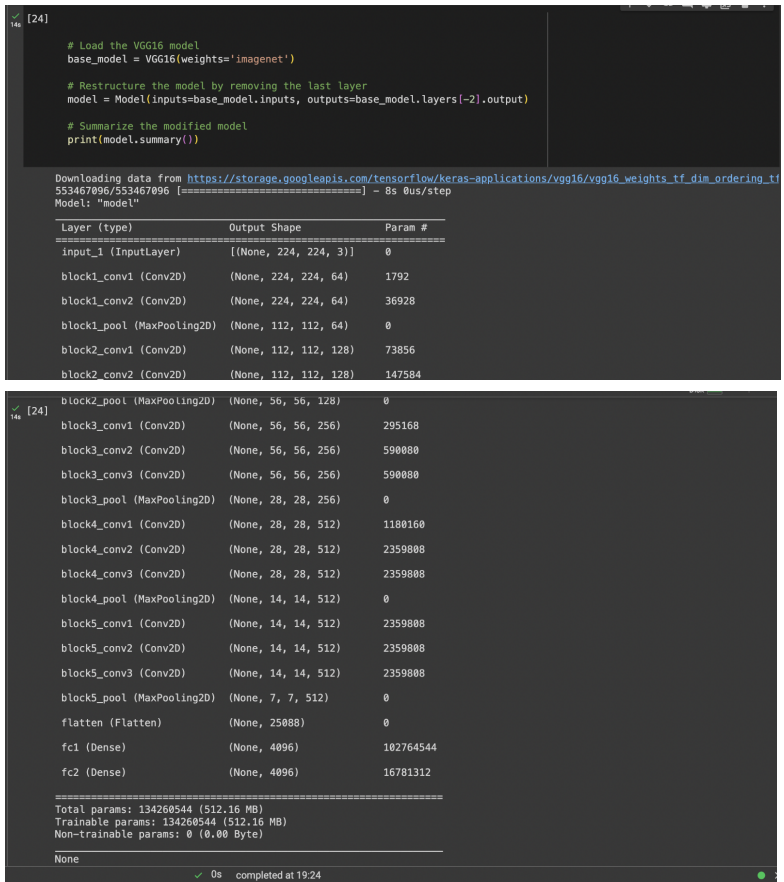


Project Development Phase Model Performance Test

Date	10 November 2023
Team ID	TEAM 591719
Project Name	IMAGE CAPTION GENERATION
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	-	 <pre> [24]: # Load the VGG16 model base_model = VGG16(weights='imagenet') # Restructure the model by removing the last layer model = Model(inputs=base_model.inputs, outputs=base_model.layers[-2].output) # Summarize the modified model print(model.summary()) Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/vgg16/vgg16_weights_tf_dim_ordering_tf_ 553467896/553467896 [=====] - 8s 0us/step Model: "model" ----- Layer (type) Output Shape Param # ----- input_1 (InputLayer) (None, 224, 224, 3) 0 block1_conv1 (Conv2D) (None, 224, 224, 64) 1792 block1_conv2 (Conv2D) (None, 224, 224, 64) 36928 block1_pool (MaxPooling2D) (None, 112, 112, 64) 0 block2_conv1 (Conv2D) (None, 112, 112, 128) 73856 block2_conv2 (Conv2D) (None, 112, 112, 128) 147584 block2_pool (MaxPooling2D) (None, 56, 56, 128) 0 block3_conv1 (Conv2D) (None, 56, 56, 256) 295168 block3_conv2 (Conv2D) (None, 56, 56, 256) 590080 block3_conv3 (Conv2D) (None, 56, 56, 256) 590080 block3_pool (MaxPooling2D) (None, 28, 28, 256) 0 block4_conv1 (Conv2D) (None, 28, 28, 512) 1180160 block4_conv2 (Conv2D) (None, 28, 28, 512) 2359808 block4_conv3 (Conv2D) (None, 28, 28, 512) 2359808 block4_pool (MaxPooling2D) (None, 14, 14, 512) 0 block5_conv1 (Conv2D) (None, 14, 14, 512) 2359808 block5_conv2 (Conv2D) (None, 14, 14, 512) 2359808 block5_conv3 (Conv2D) (None, 14, 14, 512) 2359808 block5_pool (MaxPooling2D) (None, 7, 7, 512) 0 flatten (Flatten) (None, 25088) 0 fc1 (Dense) (None, 4096) 102764544 fc2 (Dense) (None, 4096) 16781312 ----- Total params: 134260544 (512.16 MB) Trainable params: 134260544 (512.16 MB) Non-trainable params: 0 (0.00 Byte) None 0s completed at 19:24 </pre>

2.	Accuracy	BLEU-1: 0.54 BLEU-2: 0.32	<div><div>CALCULATES BLEU SCORES</div><div><pre>from nltk.translate.bleu_score import corpus_bleu # validate with test data actual , predicted =list(),list() for key in tqdm(test): # get actual caption captions = mapping[key] # predict the caption for image y_pred = predict_caption(model, features[key],tokenizer,max_length) #split into words actual_captions = [caption.split() for caption in captions] y_pred = y_pred.split() #append to the list actual.append(actual_captions) predicted.append(y_pred) #calculate BLEU Score print("BLEU-1: %f" % corpus_bleu(actual,predicted,weights=(1.0,0,0,0))) print("BLEU-2: %f" % corpus_bleu(actual,predicted,weights=(0.5,0.5,0,0)))</pre></div><div><div>100%</div><div>810/810 [08:23<00:00, 1.61it/s]</div><div>BLEU-1: 0.549099 BLEU-2: 0.324626</div></div></div>
3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	NOT RELATED TO MY PROJECT