

## Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMIDxxxxxx
Project Name	Image Caption Generator
Maximum Marks	10 Marks

### Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Model Summary	<b>Total params:</b> 4,316,709  <b>Trainable params:</b> 4,316,709  <b>Non-trainable params:</b> 0	<pre> Model: "model_1" Layer (type)                 Output Shape              Param #   Connected to ===== input_2 (InputLayer)         [(None, 1920)]            0         (None, 1920) dense (Dense)                 (None, 256)               491776    input_2[0][0] input_3 (InputLayer)         [(None, 34)]              0         (None, 34) reshape (Reshape)            (None, 1, 256)            0         dense[0][0] embedding (Embedding)        (None, 35, 256)           2172160   input_3[0][0] concatenate (Concatenate)    (None, 35, 256)           0         reshape[0][0]                                 embedding[0][0] lstm (LSTM)                  (None, 256)               525312    concatenate[0][0] dropout (Dropout)            (None, 256)               0         lstm[0][0] add (Add)                    (None, 256)               0         dropout[0][0]                                 dense[0][0] dense_1 (Dense)              (None, 128)               32896     add[0][0] dropout_1 (Dropout)          (None, 128)               0         dense_1[0][0] dense_2 (Dense)              (None, 8486)              1094565   dropout_1[0][0] ===== Total params: 4,316,709 Trainable params: 4,316,709 Non-trainable params: 0           </pre>
2.	Accuracy	<b>Train Loss:</b>  loss: 3.1411  <b>Validation Loss:</b>  val_loss: 3.6506	<pre> Epoch 1/50 537/537 [=====] - 220s 405ms/step - loss: 5.1205 - val_loss: 4.2350 Epoch 00001: val_loss improved from inf to 4.23503, saving model to model.h5 Epoch 2/50 537/537 [=====] - 45s 84ms/step - loss: 4.1752 - val_loss: 3.9018 Epoch 00002: val_loss improved from 4.23503 to 3.90180, saving model to model.h5 Epoch 3/50 537/537 [=====] - 45s 85ms/step - loss: 3.9049 - val_loss: 3.7579 Epoch 00003: val_loss improved from 3.90180 to 3.75791, saving model to model.h5 Epoch 4/50 537/537 [=====] - 46s 86ms/step - loss: 3.7460 - val_loss: 3.6835 Epoch 00004: val_loss improved from 3.75791 to 3.68351, saving model to model.h5 Epoch 5/50 537/537 [=====] - 45s 84ms/step - loss: 3.6271 - val_loss: 3.6467 Epoch 00005: val_loss improved from 3.68351 to 3.64670, saving model to model.h5 Epoch 6/50 537/537 [=====] - 45s 84ms/step - loss: 3.5335 - val_loss: 3.6419 Epoch 00006: val_loss improved from 3.64670 to 3.64188, saving model to model.h5 Epoch 7/50 537/537 [=====] - 45s 84ms/step - loss: 3.4608 - val_loss: 3.6138 Epoch 00007: val_loss improved from 3.64188 to 3.61383, saving model to model.h5 Epoch 8/50 537/537 [=====] - 45s 84ms/step - loss: 3.3963 - val_loss: 3.6362 Epoch 00008: val_loss did not improve from 3.61383 Epoch 9/50 537/537 [=====] - 44s 83ms/step - loss: 3.3404 - val_loss: 3.6292 Epoch 00009: val_loss did not improve from 3.61383 Epoch 10/50 537/537 [=====] - 45s 84ms/step - loss: 3.2865 - val_loss: 3.6335 Epoch 00010: val_loss did not improve from 3.61383 Epoch 00010: ReduceLROnPlateau reducing learning rate to 0.000200000000049949028. Epoch 11/50 537/537 [=====] - 46s 85ms/step - loss: 3.1726 - val_loss: 3.6414 Epoch 00011: val_loss did not improve from 3.61383 Epoch 12/50 537/537 [=====] - 47s 87ms/step - loss: 3.1411 - val_loss: 3.6506 Epoch 00012: val_loss did not improve from 3.61383 Restoring model weights from the end of the best epoch. Epoch 00012: early stopping           </pre>

3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	Not Applicable
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