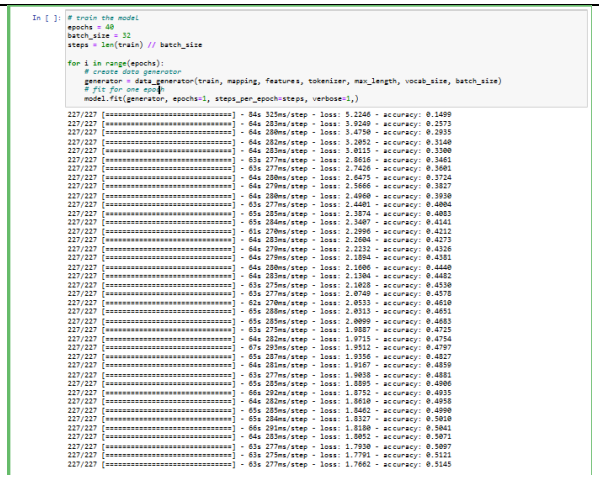
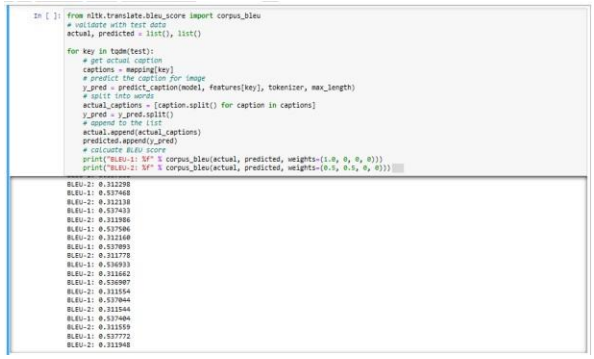
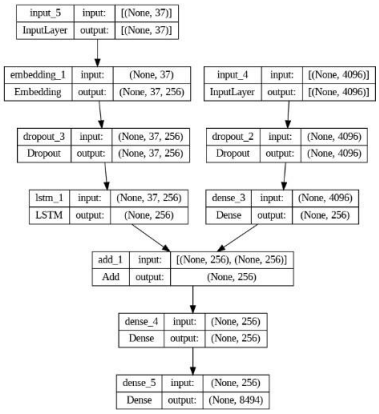
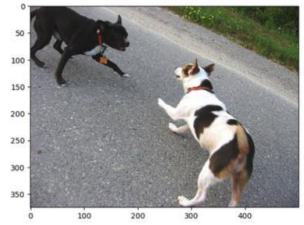
Project Development Phase
Model Performance Test

Date	22 November 2023
Team ID	591718
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.	Metrics	**Regression Model:** BLUE score, Accuracy and Loss.	 **BLUE SCORE-** 

2.	Tune the Model	Hyperparameter Tuning - Validation Method -	Hyperparamter tuning In [ ]: ``` # encoder model # image feature layers inputs1 = Input(shape=(4096,)) fe1 = Dropout(0.5)(inputs1) fe2 = Dense(256, activation='relu')(fe1) # sequence feature layers inputs2 = Input(shape=(max_length,)) se1 = Embedding(vocab_size, 256, mask_zero=True)(inputs2) se2 = Dropout(0.5)(se1) se3 = LSTM(256)(se2) # decoder model decoder1 = add([fe2, se3]) decoder2 = Dense(256, activation='relu')(decoder1) outputs = Dense(vocab_size, activation='softmax')(decoder2) model = Model(inputs=[inputs1, inputs2], outputs=outputs) model.compile(loss='categorical_crossentropy', optimizer='adam',metrics=["accuracy"]) # plot the model plot_model(model, show_shapes=True) ``` Out[24]:  Validation- In [ ]: ``` generate_caption("1001773457_577c3a7d70.jpg") ``` ----------Actual---------- start black dog and spotted dog are fighting end start black dog and tri-colored dog playing with each other on the road end start black dog and white dog with brown spots are staring at each other in the street end start two dogs of different breeds looking at each other on the road end start two dogs on pavement moving toward each other end ----------Predicted---------- start black dog and spotted dog playing on pavement end  In [ ]: ``` generate_caption("1002674143_1b742ab4b8.jpg") ``` ----------Actual---------- start little girl covered in paint sits in front of painted rainbow with her hands in bowl end start little girl is sitting in front of large painted rainbow end start small girl in the grass plays with fingerpaints in front of white canvas with rainbow on it end start there is girl with pigtails sitting in front of rainbow painting end start young girl with pigtails painting outside in the grass end ----------Predicted---------- start two children playing in plastic colored plastic structure end 

			In [ ]: `generate_caption("101669240_b2d3e7f17b.jpg")` `--------------------Actual--------------------` start man in hat is displaying pictures next to skier in blue hat end start man skis past another man displaying paintings in the snow end start person wearing skis looking at framed pictures set up in the snow end start skier looks at framed pictures in the snow next to trees end start man on skis looking at artwork for sale in the snow end `--------------------Predicted--------------------` start man in skis is displaying paintings in the snow end