

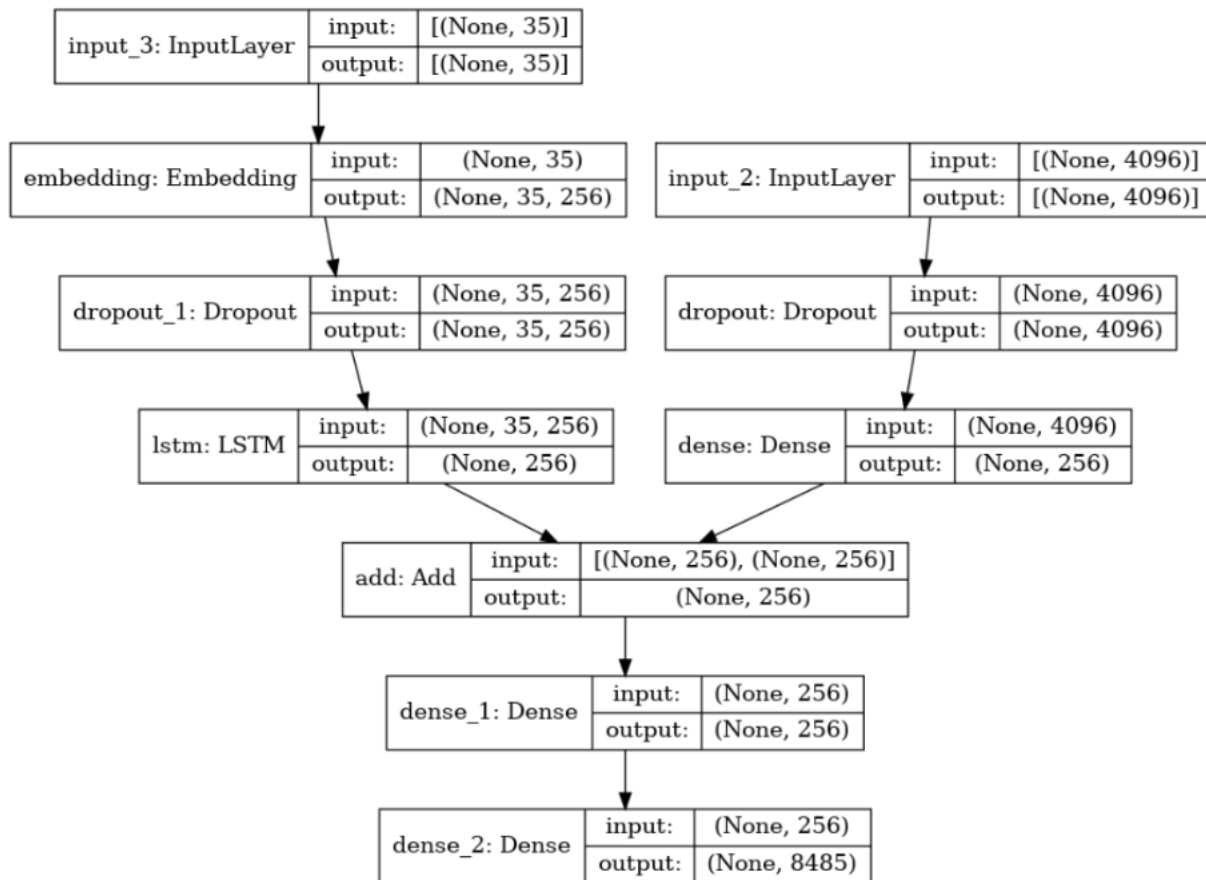
Project Development Phase
Model Performance Test

Date	21 November 2023
Team ID	Team - 592198
Project Name	Project – 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: MAE - , MSE - , RMSE - , R2 score - Classification Model: Confusion Matrix - , Accuray Score- & Classification Report -	Using BLEU for acuuracy scores
2.	Tune the Model	Hyperparameter Tuning - Validation Method -	Splitting into train, test, validation set



- categorical_crossentropy is used with large no. of classes

```

model.compile(loss='categorical_crossentropy', optimizer="adam")

```

```

] # model training
epochs = 20
batch_size = 3
steps = len(train_descriptions)//64

```

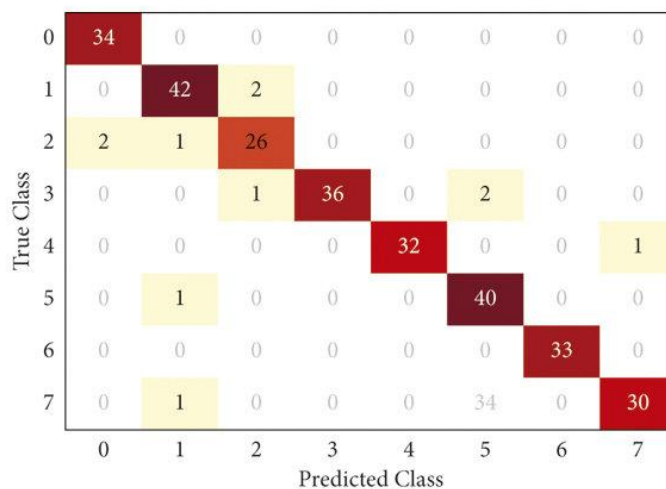
```

import pydot
import tensorflow as tf
import graphviz
tf.keras.utils.plot_model(model, show_shapes=True)

```

```
from sklearn.metrics import classification_report
print(classification_report(y_test, predictions))
```

	precision	recall	f1-score	support
0	0.81	0.88	0.85	2986
1	0.72	0.60	0.66	1514
accuracy			0.79	4500
macro avg	0.77	0.74	0.75	4500
weighted avg	0.78	0.79	0.78	4500



```
generate_caption("1001773457_577c3a7d70.jpg")
```

-----Actual-----

```
startseq black dog and spotted dog are fighting endseq
startseq black dog and tri-colored dog playing with each other on the road endseq
startseq black dog and white dog with brown spots are staring at each other in the street endseq
startseq two dogs of different breeds looking at each other on the road endseq
startseq two dogs on pavement moving toward each other endseq
```

-----Predicted-----

```
startseq two dogs play with each other in the grass endseq
```

