

## Model Development Phase Template

Date	15 October 2024
Team ID	739743
Project Title	Spooky Author Identification Using Deep 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):

```
model.fit( X_train, y_train, validation_data=(X_val, y_val), epochs=10, batch_size=128)
```

Model	Summary	Training and Validation Performance Metrics
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Keras

```
# Display the model's architecture
model.summary()
```

Model: "sequential"

Layer (type)	Output Shape	Param #
embedding (Embedding)	?	0 (unbuilt)
lstm (LSTM)	?	0 (unbuilt)
global_max_pooling1d (GlobalMaxPooling1D)	?	0 (unbuilt)
dense (Dense)	?	0 (unbuilt)
dropout (Dropout)	?	0 (unbuilt)
dense_1 (Dense)	?	0 (unbuilt)

Total params: 0 (0.00 B)  
Trainable params: 0 (0.00 B)  
Non-trainable params: 0 (0.00 B)

```
model.summary()
```

Model: "sequential\_1"

Layer (type)	Output Shape	Param #
embedding_1 (Embedding)	?	0 (unbuilt)
conv1d (Conv1D)	?	0 (unbuilt)
global_max_pooling1d_1 (GlobalMaxPooling1D)	?	0 (unbuilt)
dense_2 (Dense)	?	0 (unbuilt)
dropout_1 (Dropout)	?	0 (unbuilt)
dense_3 (Dense)	?	0 (unbuilt)

Total params: 0 (0.00 B)  
Trainable params: 0 (0.00 B)  
Non-trainable params: 0 (0.00 B)



Model Validation and Evaluation Report (5 marks):

	<div><div>model.summary()</div><div>Model: "sequential_2"</div><table><tr><th>Layer (type)</th><th>Output Shape</th><th>Param #</th></tr><tr><td>embedding_2 (Embedding)</td><td>?</td><td>0 (unbuilt)</td></tr><tr><td>conv1d_1 (Conv1D)</td><td>?</td><td>0 (unbuilt)</td></tr><tr><td>global_max_pooling1d_2 (GlobalMaxPooling1D)</td><td>?</td><td>0 (unbuilt)</td></tr><tr><td>dense_4 (Dense)</td><td>?</td><td>0 (unbuilt)</td></tr><tr><td>dropout_2 (Dropout)</td><td>?</td><td>0 (unbuilt)</td></tr><tr><td>dense_5 (Dense)</td><td>?</td><td>0 (unbuilt)</td></tr></table><div>Total params: 0 (0.00 B) Trainable params: 0 (0.00 B) Non-trainable params: 0 (0.00 B)</div></div>	Layer (type)	Output Shape	Param #	embedding_2 (Embedding)	?	0 (unbuilt)	conv1d_1 (Conv1D)	?	0 (unbuilt)	global_max_pooling1d_2 (GlobalMaxPooling1D)	?	0 (unbuilt)	dense_4 (Dense)	?	0 (unbuilt)	dropout_2 (Dropout)	?	0 (unbuilt)	dense_5 (Dense)	?	0 (unbuilt)	
Layer (type)	Output Shape	Param #																					
embedding_2 (Embedding)	?	0 (unbuilt)																					
conv1d_1 (Conv1D)	?	0 (unbuilt)																					
global_max_pooling1d_2 (GlobalMaxPooling1D)	?	0 (unbuilt)																					
dense_4 (Dense)	?	0 (unbuilt)																					
dropout_2 (Dropout)	?	0 (unbuilt)																					
dense_5 (Dense)	?	0 (unbuilt)																					

