

Generating Poems Using Natural Language Processing (NLP) with Python

Python Implementation Source Code of the Project is available on [GitHub](#)

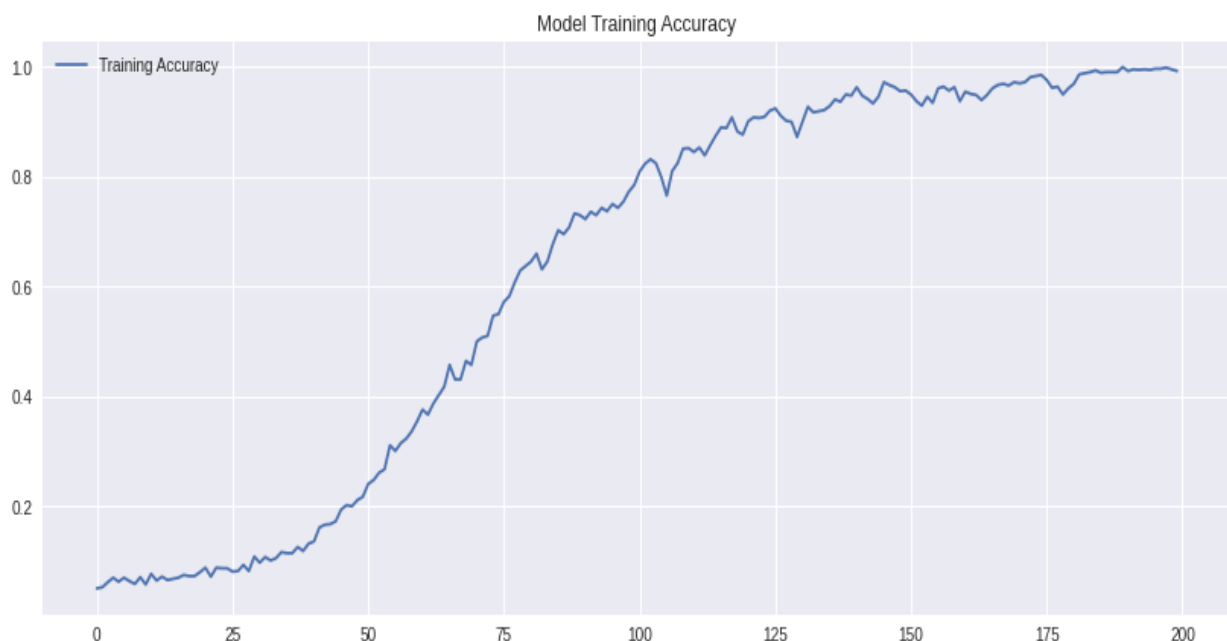
1. LSTM Deep Neural Network Architecture Summary

```
Model: "sequential"
```

Layer (type)	Output Shape	Param #
embedding (Embedding)	(None, 25, 50)	19450
lstm (LSTM)	(None, 25, 256)	314368
dropout (Dropout)	(None, 25, 256)	0
lstm_1 (LSTM)	(None, 256)	525312
dropout_1 (Dropout)	(None, 256)	0
dense (Dense)	(None, 389)	99973

```
=====  
Total params: 959,103  
Trainable params: 959,103  
Non-trainable params: 0
```

2. LSTM Neural Network Model Accuracy



3. LSTM Neural Network Model Loss



LSTM Model Results:

Model Accuracy: 100.00%

Model Loss: 0.0287

4. Generated Poems along with BLEU Scores

Poem 1:

Seed word sequence gives his light and gives his heat away and flowers and trees and beasts and men receive Comfort in morning joy in the noonday and

Predicted words we are put on earth little space that we may learn to bear the beams of love and these black bodies and this sunburnt face

BLEU Score for predicted words: 1.0

Poem 2:

Seed word sequence gives his light and gives his heat away and flowers and trees and beasts and men receive Comfort in morning joy in the noonday and

Predicted words is but cloud and like shady grove for when our souls have learn the heat to bear The cloud will vanish, we shall hear his

BLEU Score for predicted words: 1.0

Poem 3:

Seed word sequence gives his light and gives his heat away and flowers and trees and beasts and men receive Comfort in morning joy in the noonday and

Predicted words voice saying come out from the grove my love and care and round my golden tent like lambs rejoice thus did my mother say and

BLEU Score for predicted words: 1.0