AHSANULLAH UNIVERSITY OF SCIENCE & TECHNOLOGY

Assignment on Text Classification

Course No: CSE 4238

Course Name: Soft Computing Lab

Section: C Lab Group: C2

Semester: Fall 2020

Submitted to:

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Submitted By:

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Report

This Study is on Text Classification. A CNN model was created using Dataset-3.

1. **Make necessary tables and graphs/charts to show your result and discuss them.**

i. CNN model:

```
Model: "sequential"
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
embedding (Embedding)        (None, 60, 16)            160000
_________________________________________________________________
conv1d (Conv1D)              (None, 58, 64)            3136
_________________________________________________________________
max_pooling1d (MaxPooling1D) (None, 29, 64)            0
_________________________________________________________________
conv1d_1 (Conv1D)            (None, 27, 32)            6176
_________________________________________________________________
max_pooling1d_1 (MaxPooling1 (None, 13, 32)            0
_________________________________________________________________
conv1d_2 (Conv1D)            (None, 11, 16)            1552
_________________________________________________________________
global_max_pooling1d (Global (None, 16)                0
_________________________________________________________________
dense (Dense)                (None, 10)                170
_________________________________________________________________
dense_1 (Dense)              (None, 1)                 11
=================================================================
Total params: 171,045
Trainable params: 171,045
Non-trainable params: 0
_________________________________________________________________
None
```

ii. Classification Report:

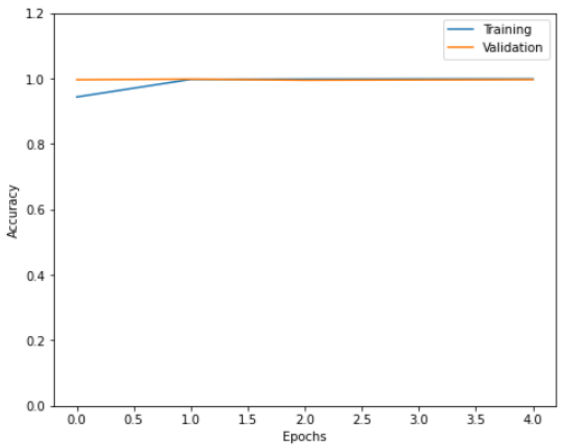
Train Accuracy	0.999
Test Accuracy	0.997

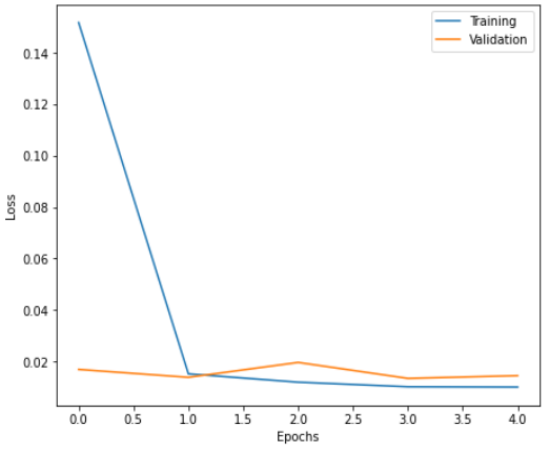
	Precision	Recall	F1-Score
0	1.00	1.00	1.00
1	0.99	0.99	0.99

iii. Prediction Example:

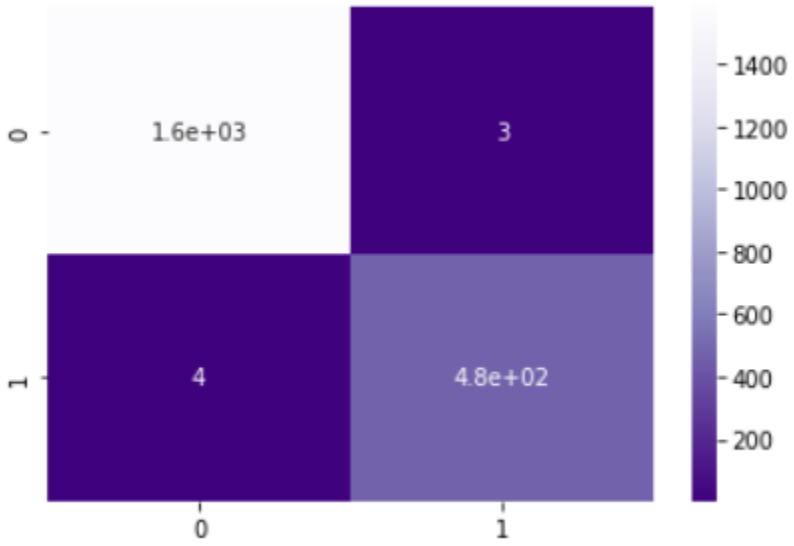
Tweet: @lapcat Need to send 'em to my accountant tomorrow. Oddly, I wasn't even referring to my taxes. Those are supporting evidence, though.
Sentiment: 0
Predicted Sentiment: 0

iv. The Accuracy and Loss Curve:





v. **Confusion Matrix:**



vi. **Upload your code in Github and share the link in your report.**

Link: https://github.com/othiru/SoftComputingAssignment3