All have completed after 2nd epoch…

Embedded(TW, EVL)

LSTM & then DROPOUT layers only

PADDING\_LENGTH = 1000

HIDDEN\_LAYER\_SIZE = 300

TOP\_WORDS = 5000

MAX\_REVIEW\_LENGTH = 500

EMBEDDING\_VECTOR = 128

VALIDATION\_SIZE = 1000

DROPOUT = 0.2

**BATCH\_SIZE** = 16

Evaluation:

F1 Score: 0.74

Accuracy: 58.62%

Validation:

F1 Score: 0.77

Accuracy: 55.65%

**BATCH\_SIZE** = 32

Evaluation:

F1 Score: 0.71

Accuracy: 60.49%

Validation:

F1 Score: 0.75

Accuracy: 56.09%

**BATCH\_SIZE** = 64

Evaluation:

F1 Score: 0.70

Accuracy: 54.47%

Validation:

F1 Score: 0.70

Accuracy: 54.78%

**BATCH\_SIZE** = 52

Evaluation:

F1 Score: 0.70

Accuracy: 57.07%

Validation:

F1 Score: 0.73

Accuracy: 53.04%

**BATCH\_SIZE** = 48

Evaluation:

F1 Score: 0.70

Accuracy: 58.21%

Validation:

F1 Score: 0.75

Accuracy: 55.22%

**BATCH\_SIZE** = 39

Evaluation:

F1 Score: 0.68

Accuracy: 58.86%

Validation:

F1 Score: 0.70

Accuracy: 55.65%

**BEST BATCH SIZE IS 32**

PADDING\_LENGTH = 1000

**HIDDEN\_LAYER\_SIZE** = 250

TOP\_WORDS = 5000

MAX\_REVIEW\_LENGTH = 500

EMBEDDING\_VECTOR = 128

VALIDATION\_SIZE = 1000

DROPOUT = 0.2

BATCH\_SIZE = 32

Evaluation:

F1 Score: 0.72

Accuracy: 57.32%

Validation:

F1 Score: 0.77

Accuracy: 54.78%

**HIDDEN\_LAYER\_SIZE** = 275

Evaluation:

F1 Score: 0.73

Accuracy: 57.48%

Validation:

F1 Score: 0.77

Accuracy: 53.48%

**HIDDEN\_LAYER\_SIZE** = 300

Evaluation:

F1 Score: 0.71

Accuracy: 60.49%

Validation:

F1 Score: 0.75

Accuracy: 56.09%

**HIDDEN\_LAYER\_SIZE** = 325

Evaluation:

F1 Score: 0.71

Accuracy: 58.70%

Validation:

F1 Score: 0.76

Accuracy: 53.48%

**HIDDEN\_LAYER\_SIZE** = 350

Evaluation:

F1 Score: 0.86

Accuracy: 55.53%

Validation:

F1 Score: 0.90

Accuracy: 53.04%

**HIDDEN\_LAYER\_SIZE** = 305

Evaluation:

F1 Score: 0.72

Accuracy: 56.91%

Validation:

F1 Score: 0.75

Accuracy: 53.04%

**HIDDEN\_LAYER\_SIZE** = 315

Evaluation:

F1 Score: 0.69

Accuracy: 54.31%

Validation:

F1 Score: 0.69

Accuracy: 50.43%

**HIDDEN\_LAYER\_SIZE** = 295

Evaluation:

F1 Score: 0.72

Accuracy: 57.48%

Validation:

F1 Score: 0.75

Accuracy: 56.09%

**BEST HIDDEN LAYER SIZE 300**

PADDING\_LENGTH = 1000

HIDDEN\_LAYER\_SIZE = 300

**TOP\_WORDS** = 5000

MAX\_REVIEW\_LENGTH = 500

EMBEDDING\_VECTOR = 128

VALIDATION\_SIZE = 1000

DROPOUT = 0.2

BATCH\_SIZE = 32

Evaluation:

F1 Score: 0.71

Accuracy: 60.49%

Validation:

F1 Score: 0.75

Accuracy: 56.09%

**TOP\_WORDS** = 4750

Evaluation:

F1 Score: 0.70

Accuracy: 56.26%

Validation:

F1 Score: 0.73

Accuracy: 53.91%

**TOP\_WORDS** = 5250

Evaluation:

F1 Score: 0.71

Accuracy: 59.35%

Validation:

F1 Score: 0.75

Accuracy: 56.96%

**TOP\_WORDS** = 5500

Evaluation:

F1 Score: 0.73

Accuracy: 58.46%

Validation:

F1 Score: 0.76

Accuracy: 56.52%

**BEST TOP WORDS = 5000**

**EVL = 64**

Evaluation:

F1 Score: 0.69

Accuracy: 60.73%

Validation:

F1 Score: 0.71

Accuracy: 56.52%

**EVL = 32**

\*NEEDED 3 EPOCHS!!!

Evaluation:

F1 Score: 0.79

Accuracy: 59.11%

Validation:

F1 Score: 0.82

Accuracy: 55.65%

**EVL = 96**

Evaluation:

F1 Score: 0.72

Accuracy: 60.24%

Validation:

F1 Score: 0.74

Accuracy: 60.87%

**EVL = 112**

Evaluation:

F1 Score: 0.70

Accuracy: 60.98%

Validation:

F1 Score: 0.73

Accuracy: 60.43%

**EVL = 120**

Evaluation:

F1 Score: 0.71

Accuracy: 56.34%

Validation:

F1 Score: 0.73

Accuracy: 55.65%

**EVL = 116**

Evaluation:

F1 Score: 0.72

Accuracy: 57.56%

Validation:

F1 Score: 0.74

Accuracy: 53.91%

**EVL = 108**

Evaluation:

F1 Score: 0.75

Accuracy: 58.05%

Validation:

F1 Score: 0.79

Accuracy: 53.91%

**Best EVL = 112**

**Dropout = .20**

Evaluation:

F1 Score: 0.70

Accuracy: 60.98%

Validation:

F1 Score: 0.73

Accuracy: 60.43%

**Dropout = .15**

Evaluation:

F1 Score: 0.71

Accuracy: 57.97%

Validation:

F1 Score: 0.74

Accuracy: 54.35%

**Dropout = .25**

Evaluation:

F1 Score: 0.71

Accuracy: 54.15%

Validation:

F1 Score: 0.74

Accuracy: 49.13%

**Dropout = .19**

Evaluation:

F1 Score: 0.72

Accuracy: 59.43%

Validation:

F1 Score: 0.75

Accuracy: 59.13%

**Dropout = .21**

Evaluation:

F1 Score: 0.71

Accuracy: 57.89%

Validation:

F1 Score: 0.77

Accuracy: 56.09%

**Best Dropout is 0.20**

**DROPOUT LAYER 2**

Evaluation:

F1 Score: 0.70

Accuracy: 59.11%

Validation:

F1 Score: 0.74

Accuracy: 58.70%

**ADDING A LAYER LOWERS ACCURACY**

**Evaluation:**

**F1 Score: 0.74**

**Accuracy: 61.06%**

**Validation:**

**F1 Score: 0.75**

**Accuracy: 58.70% normal**

**1**

**Evaluation:**

**F1 Score: 0.73**

**Accuracy: 60.57%**

**Validation:**

**F1 Score: 0.74**

**Accuracy: 59.57%**

**2**

**Evaluation:**

**F1 Score: 0.71**

**Accuracy: 60.89%**

**Validation:**

**F1 Score: 0.76**

**Accuracy: 58.26%**

**Conservative Accuracy: 57.14285714285714 %**

**Liberal Accuracy: 65.03623188405797 %**

**3**

**Evaluation:**

**F1 Score: 0.71**

**Accuracy: 58.86%**

**Validation:**

**F1 Score: 0.72**

**Accuracy: 60.00%**

**Conservative Accuracy: 49.107142857142854 %**

**Liberal Accuracy: 66.30434782608695 %**