|  |  |  |  |
| --- | --- | --- | --- |
| Modalitiy | Model | classifer | F1 score |
| Text | average word vectors | Random-forest | 0.57 |
|  | Naïve-bayes | 0.65 |
|  | Boosting | 0.66 |
|  | <neural net–(10\*100\*(4)> | 0.69 |
|  | <svm> | 0.70 |
| Bi-lstm | Bi-lstm | 0.7459 |
|  |  | LStm- dense | 0.723 |
| Image | resnet (512 -D) | <svm> | 0.58 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Glove: glove.twitter.27B.200d.txt

Unreliability of same scores as lot of parameters..(not mentioned what was the split in aper)

Text modality

Best

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Layer (type) Output Shape Param #

=================================================================

input\_86 (InputLayer) (None, 34) 0

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embedding\_89 (Embedding) (None, 34, 100) 499000

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bidirectional\_93 (Bidirectio (None, 34, 200) 160800

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bidirectional\_94 (Bidirectio (None, 34, 200) 240800

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time\_distributed\_50 (TimeDis (None, 34, 100) 20100

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flatten\_7 (Flatten) (None, 3400) 0

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dense\_116 (Dense) (None, 100) 340100

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dense\_117 (Dense) (None, 4) 404

=================================================================

Total params: 1,261,204li

Trainable params: 762,204

Non-trainable params: 499,000

|  |  |  |
| --- | --- | --- |
| Embeddings | Classifier |  |
| Glove.twiiter | Bi-lsmt<flatten layer> | 0.73577236 (best 74.593496) |
|  | 2-Bi-lstm-<flatten layer> | 0.75 |
|  | 2 Bi-lstm-<mean> | 0.684935 |
|  | 2 Bi-lstm-<sum> | 0.703 |
|  | 2- bi-lstm | 0.725 |
|  | Lstm-dense | 0.72357724 |
|  | mean embedding-dense | 0.7093 |

Single bi-lstm

Layer (type) Output Shape Param #

=================================================================

input\_112 (InputLayer) (None, 34) 0

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embedding\_115 (Embedding) (None, 34, 100) 499000

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bidirectional\_131 (Bidirecti (None, 34, 100) 160800

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time\_distributed\_76 (TimeDis (None, 34, 100) 10100

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flatten\_26 (Flatten) (None, 3400) 0

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dense\_180 (Dense) (None, 100) 340100

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dense\_181 (Dense) (None, 4) 404

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Total params: 1,010,404

Trainable params: 511,404

Non-trainable params: 499,000

input = Input(shape=(max\_len,))

model = Embedding(vocab\_size, 100, weights=[embedding\_matrix], input\_length=max\_length,trainable=False)(input)

model = Bidirectional(LSTM(units=100,return\_sequences=True,dropout=0.25),merge\_mode="mul")(model)

model = TimeDistributed( Dense(100, activation="relu"))(model)

model = Flatten()(model)

model = Dense(100, activation = 'relu')(model)

out = (Dense(4, activation = 'softmax'))(model)