

| Models | AA-Sentiment | | | | | HA-Sentiment | | |
|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | Precision | Recall | ROC Area | Accuracy | F1 Score | Precision | Recall | ROC Area |
| T-LSTM | 0.921 | 0.901 | 0.931 | 0.866 | 0.911 | 0.708 | 0.825 | 0.791 |
| E-LSTM | 0.944 | 0.86 | 0.933 | 0.855 | 0.900 | 0.816 | 0.825 | 0.831 |
| ATT-E-LSTM | 0.948 | 0.890 | 0.954 | 0.879 | 0.918 | 0.825 | 0.868 | 0.871 |
| BiE-LSTM | 0.961 | 0.891 | 0.966 | 0.890 | 0.924 | 0.822 | 0.881 | 0.891 |
| MATT-BiE-LSTM | 0.972 | 0.895 | 0.975 | 0.900 | 0.932 | 0.831 | 0.872 | 0.891 |
| WATT-BiE-LSTM | 0.949 | 0.895 | 0.960 | 0.883 | 0.921 | 0.830 | 0.889 | 0.891 |