|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | Feature Sets | | | |
| Classifiers | Evaluation Metrics | TF-IDF | Word2vec | Glove | FastText |
| Naïve Bayes | Accuracy | 0.624 | 0.476 | 0.481 | 0.529 |
| Precision | 0.575 | 0.475 | 0.477 | 0.532 |
| Recall | 0.815 | 0.978 | 0.972 | 0.709 |
| F1 score | 0.669 | 0.637 | 0.637 | 0.542 |
| SVM | Accuracy | 0.727 | 0.524 | 0.524 | 0.524 |
| Precision | 0.767 | 0.000 | 0.000 | 0.000 |
| Recall | 0.613 | 0.000 | 0.000 | 0.000 |
| F1 score | 0.672 | 0.000 | 0.000 | 0.000 |
| Random Forest | Accuracy | 0.708 | 0.632 | 0.601 | 0.747 |
| Precision | 0.738 | 0.646 | 0.609 | 0.770 |
| Recall | 0.597 | 0.508 | 0.462 | 0.667 |
| F1 score | 0.651 | 0.563 | 0.518 | 0.710 |
| Decision Tree | Accuracy | 0.699 | 0.593 | 0.593 | 0.675 |
| Precision | 0.722 | 0.572 | 0.572 | 0.653 |
| Recall | 0.568 | 0.582 | 0.582 | 0.659 |
| F1 score | 0.631 | 0.571 | 0.571 | 0.654 |

Table 1: 10-Fold Cross Validation based on accuracy

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | Feature Sets | | | |
| Classifiers | Evaluation Metrics | TF-IDF | Word2vec | Glove | FastText |
| Naïve Bayes | Accuracy | 0.631 | 0.476 | 0.464 | 0.476 |
| Precision | 0.565 | 0.476 | 0.469 | 0.476 |
| Recall | 0.975 | 0.975 | 0.950 | 0.975 |
| F1 score | 0.716 | 0.639 | 0.628 | 0.639 |
| SVM | Accuracy | 0.690 | 0.512 | 0.512 | 0.512 |
| Precision | 0.826 | 0.000 | 0.000 | 0.000 |
| Recall | 0.463 | 0.000 | 0.000 | 0.000 |
| F1 score | 0.594 | 0.000 | 0.000 | 0.000 |
| Random Forest | Accuracy | 0.702 | 0.643 | 0.548 | 0.714 |
| Precision | 0.864 | 0.690 | 0.548 | 0.730 |
| Recall | 0.463 | 0.488 | 0.415 | 0.659 |
| F1 score | 0.603 | 0.571 | 0.472 | 0.692 |
| Decision Tree | Accuracy | 0.655 | 0.560 | 0.595 | 0.726 |
| Precision | 0.628 | 0.533 | 0.562 | 0.718 |
| Recall | 0.675 | 0.600 | 0.675 | 0.700 |
| F1 score | 0.651 | 0.565 | 0.614 | 0.709 |

Table 2: Result table for Train Test ratio 80:20