|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Naïve Bayes | | | | | |
| Experiment | Technique | Accuracy | Precision | Recall | F1 |
| Experiment 1 | TFIDF | 72.04 | 72.64 | 78.34 | 75.38 |
| Experiment 2 | LDA (k=2) | 58.15 | 53.01 | 75.52 | 61.25 |
| LDA (k=4) | 57.64 | 52.09 | 89.01 | 65.72 |
| LDA (k=8) | 65.66 | 59.18 | 79.67 | 67.91 |
| Experiment 3 | TFIDF + LDA (k=2) | 57.5 | 56.68 | 54.35 | 55.49 |
| TFIDF + LDA (k=4) | 62.75 | 57.98 | 85.64 | 69.15 |
| TFIDF + LDA (k=8) | 68 | 65.43 | 72.82 | 68.93 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| SVM Radial | | | | | |
| Experiment | Technique | Accuracy | Precision | Recall | F1 |
| Experiment 1 | TFIDF | 59.69 | 83.21 | 32.14 | 57.6 |
| Experiment 2 | LDA (k=2) | 61.4 | 55.64 | 75.82 | 64.18 |
| LDA (k=4) | 62.66 | 63.86 | 41.75 | 50.49 |
| LDA (k=8) | 60 | 54.54 | 72.52 | 62.26 |
| Experiment 3 | TFIDF + LDA (k=2) | 52.25 | 51.05 | 49.44 | 50.38 |
| TFIDF + LDA (k=4) | 57.5 | 56.83 | 53.33 | 55.02 |
| TFIDF + LDA (k=8) | 67.25 | 64.28 | 73.84 | 68.73 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| SVM Linear | | | | | |
| Experiment | Technique | Accuracy | Precision | Recall | F1 |
| Experiment 1 | TFIDF | 66.24 | 69.48 | 68.2 | 68.83 |
| Experiment 2 | LDA (k=2) | 64.66 | 58.43 | 78.02 | 66.82 |
| LDA (k=4) | 64.16 | 66.95 | 42.3 | 51.85 |
| LDA (k=8) | 60.09 | 55.28 | 74.75 | 63.55 |
| Experiment 3 | TFIDF + LDA (k=2) | 54 | 52.87 | 51.79 | 52.33 |
| TFIDF + LDA (k=4) | 62.25 | 61.82 | 58.97 | 60.36 |
| TFIDF + LDA (k=8) | 65.75 | 62.28 | 75.38 | 68.21 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Random Forest | | | | | |
| Experiment | Technique | Accuracy | Precision | Recall | F1 |
| Experiment 1 | TFIDF | 76.07 | 82.1 | 71.2 | 76.65 |
| Experiment 2 | LDA (k=2) | 62.16 | 72.29 | 49.3 | 58.63 |
| LDA (k=4) | 64.66 | 63.76 | 81.1 | 71.39 |
| LDA (k=8) | 62.41 | 69.59 | 54.83 | 61.34 |
| Experiment 3 | TFIDF + LDA (k=2) | 52 | 53.17 | 53.17 | 53.1 |
| TFIDF + LDA (k=4) | 65.5 | 65.58 | 68.78 | 67.14 |
| TFIDF + LDA (k=8) | 61.5 | 62.2 | 63.41 | 62.8 |

Hybrid feature extraction method using Latent Dirichlet Allocation and Term Frequency Inverse Document Frequency to detect fake news

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