# Classifier Performance on Spam Email Dataset

## Evaluation Metrics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Classifier | Accuracy | Precision | Recall | F1-Score |
| Logistic Regression | 0.97 | 0.97 | 0.97 | 0.97 |
| Decision Tree | 0.95 | 0.95 | 0.95 | 0.95 |
| k-Nearest Neighbors | 0.83 | 0.87 | 0.83 | 0.82 |
| Naive Bayes | 0.94 | 0.94 | 0.94 | 0.94 |
| SVM | 0.99 | 0.99 | 0.99 | 0.99 |
| Random Forest | 0.98 | 0.98 | 0.98 | 0.98 |

## Cross-Validation Results

|  |  |  |
| --- | --- | --- |
| Classifier | Mean CV Accuracy | Std CV Accuracy |
| Logistic Regression | 0.97 | 0.00 |
| Decision Tree | 0.96 | 0.00 |
| k-Nearest Neighbors | 0.83 | 0.00 |
| Naive Bayes | 0.94 | 0.00 |
| SVM | 0.99 | 0.00 |
| Random Forest | 0.98 | 0.00 |