|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Accuracy | | | | | | | | | | |
| Method | Best Parameters | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | AVG OF 10 SAMPLES |
| Decision Tree |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| SVM | kernel="linear" | 0.95 | 0.95 | 0.97 | 0.97 | 0.97 | 0.94 | 0.97 | 0.94 | 0.96 | 0.94 | 0.956 |
| Naïve Bayesian |  | 0.97 | 0.97 | 0.97 | 0.99 | 0.97 | 0.97 | 0.97 | 0.97 | 0.96 | 0.97 | 0.971 |
| KNN | k = 11 | 0.86 | 0.88 | 0.85 | 0.87 | 0.86 | 0.85 | 0.82 | 0.83 | 0.83 | 0.82 | 0.847 |
| Logistic Regression | threshold=0.40 | 0.95 | 0.96 | 0.97 | 0.97 | 0.97 | 0.93 | 0.95 | 0.94 | 0.97 | 0.93 | 0.954 |
| Neural  Network |  | 0.89 | 0.89 | 0.85 | 0.88 | 0.87 | 0.85 | 0.88 | 0.82 | 0.85 | 0.85 | 0.863 |
| Bagging |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Random Forest |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Boosting |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Dataset 1:

Dataset 2:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Accuracy | | | | | | | | | | |
| Method | Best Parameters | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | AVG OF 10 SAMPLES |
| Decision Tree |  | 0.65 | 0.75 | 0.65 | 0.53 | 0.7 | 0.63 | 0.85 | 0.7 | 0.8 | 0.6 | 0.686 |
| SVM | kernel="radial" | 0.58 | 0.85 | 0.5 | 0.63 | 0.68 | 0.65 | 0.83 | 0.73 | 0.73 | 0.63 | 0.681 |
| Naïve Bayesian |  | 0.68 | 0.78 | 0.63 | 0.58 | 0.65 | 0.7 | 0.78 | 0.83 | 0.78 | 0.53 | 0.694 |
| KNN | k = 9 | 0.75 | 0.85 | 0.65 | 0.8 | 0.85 | 0.73 | 0.88 | 0.83 | 0.88 | 0.65 | 0.787 |
| Logistic Regression | threshold=0.40 | 0.68 | 0.73 | 0.68 | 0.6 | 0.63 | 0.68 | 0.73 | 0.88 | 0.8 | 0.53 | 0.694 |
| Neural  Network |  | 0.58 | 0.85 | 0.5 | 0.63 | 0.68 | 0.65 | 0.83 | 0.73 | 0.73 | 0.63 | 0.681 |
| Bagging |  | 0.65 | 0.7 | 0.6 | 0.5 | 0.7 | 0.55 | 0.73 | 0.55 | 0.7 | 0.63 | 0.631 |
| Random Forest |  | 0.7 | 0.75 | 0.6 | 0.63 | 0.68 | 0.58 | 0.78 | 0.68 | 0.73 | 0.6 | 0.673 |
| Boosting |  | 0.65 | 0.73 | 0.53 | 0.53 | 0.65 | 0.6 | 0.73 | 0.73 | 0.75 | 0.58 | 0.648 |

Dataset 3:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Accuracy | | | | | | | | | | |
| Method | Best Parameters | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | AVG OF 10 SAMPLES |
| Decision Tree |  | 0.8 | 0.8 | 0.85 | 0.65 | 0.65 | 0.95 | 0.55 | 0.65 | 0.75 | 0.8 | 0.745 |
| SVM | kernel="linear" | 0.9 | 0.9 | 0.7 | 0.8 | 0.85 | 0.85 | 0.85 | 0.9 | 0.85 | 0.85 | 0.845 |
| Naïve Bayesian |  | 0.75 | 0.8 | 0.6 | 0.7 | 0.7 | 0.65 | 0.6 | 0.8 | 0.7 | 0.65 | 0.695 |
| KNN | k = 11 | 0.75 | 0.8 | 0.85 | 0.7 | 0.85 | 0.9 | 0.7 | 0.75 | 0.9 | 0.8 | 0.800 |
| Logistic Regression | threshold=0.50 | 0.8 | 0.9 | 0.7 | 0.8 | 0.85 | 0.85 | 0.7 | 0.9 | 0.8 | 0.95 | 0.825 |
| Neural  Network |  | 0.75 | 0.8 | 0.85 | 0.7 | 0.85 | 0.9 | 0.7 | 0.75 | 0.9 | 0.85 | 0.805 |
| Bagging |  | 0.85 | 0.8 | 0.8 | 0.75 | 0.8 | 0.9 | 0.8 | 0.7 | 0.75 | 0.95 | 0.810 |
| Random Forest |  | 0.8 | 0.8 | 0.75 | 0.7 | 0.85 | 0.9 | 0.7 | 0.8 | 0.9 | 0.9 | 0.810 |
| Boosting |  | 0.75 | 0.85 | 0.75 | 0.8 | 0.55 | 0.8 | 0.75 | 0.8 | 0.85 | 0.85 | 0.775 |

Dataset 4:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Accuracy | | | | | | | | | | |
| Method | Best Parameters | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | AVG OF 10 SAMPLES |
| Decision Tree |  | 0.91 | 0.88 | 0.98 | 0.93 | 0.89 | 0.89 | 0.89 | 0.96 | 0.89 | 0.91 | 0.913 |
| SVM | kernel="sigmoid" | 0.95 | 0.95 | 0.98 | 0.98 | 0.96 | 0.93 | 0.96 | 0.96 | 0.96 | 0.93 | 0.956 |
| Naïve Bayesian |  | 0.93 | 0.91 | 0.96 | 0.93 | 0.88 | 0.91 | 0.96 | 0.96 | 0.88 | 0.95 | 0.927 |
| KNN | k = 11 | 0.70 | 0.77 | 0.65 | 0.70 | 0.75 | 0.72 | 0.79 | 0.68 | 0.65 | 0.72 | 0.713 |
| Logistic Regression | threshold=0.50 | 0.95 | 0.89 | 0.95 | 0.98 | 0.82 | 0.91 | 0.98 | 0.96 | 0.95 | 0.95 | 0.934 |
| Neural  Network |  | 0.68 | 0.63 | 0.60 | 0.63 | 0.72 | 0.65 | 0.65 | 0.63 | 0.63 | 0.62 | 0.644 |
| Bagging |  | 0.96 | 0.93 | 0.98 | 0.96 | 0.91 | 0.93 | 0.98 | 1 | 0.91 | 0.96 | 0.952 |
| Random Forest |  | 0.96 | 0.98 | 0.96 | 0.95 | 0.91 | 0.93 | 0.96 | 1 | 0.95 | 0.98 | 0.958 |
| Boosting |  | 0.95 | 0.96 | 0.96 | 1 | 0.93 | 0.94 | 0.96 | 1 | 0.93 | 1 | 0.960 |

Dataset 5:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Accuracy | | | | | | | | | | |
| Method | Best Parameters | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | AVG OF 10 SAMPLES |
| Decision Tree |  | 0.83 | 0.89 | 0.94 | 0.86 | 0.92 | 0.83 | 0.92 | 0.92 | 0.86 | 0.92 | 0.889 |
| SVM | kernel="linear" | 0.88 | 0.83 | 0.89 | 0.81 | 0.78 | 1 | 0.94 | 0.94 | 0.83 | 0.86 | 0.876 |
| Naïve Bayesian |  | 0.83 | 0.89 | 0.94 | 0.83 | 0.94 | 0.89 | 0.81 | 0.89 | 0.94 | 0.89 | 0.885 |
| KNN | k = 11 | 0.92 | 0.86 | 0.92 | 0.86 | 0.80 | 1 | 0.94 | 0.97 | 0.89 | 0.89 | 0.905 |
| Logistic Regression | threshold=0.50 | 0.94 | 0.70 | 0.86 | 0.86 | 0.83 | 0.94 | 0.97 | 0.86 | 0.73 | 0.89 | 0.858 |
| Neural  Network |  | 0.40 | 0.48 | 0.36 | 0.45 | 0.36 | 0.44 | 0.35 | 0.35 | 0.36 | 0.33 | 0.388 |
| Bagging |  | 0.94 | 0.86 | 0.94 | 0.89 | 0.92 | 0.89 | 0.89 | 0.94 | 0.92 | 0.89 | 0.908 |
| Random Forest |  | 0.92 | 0.86 | 0.94 | 0.94 | 0.92 | 1 | 0.97 | 0.89 | 0.92 | 0.94 | 0.930 |
| Boosting |  | 0.94 | 0.89 | 0.92 | 0.89 | 0.94 | 0.94 | 0.97 | 0.94 | 0.80 | 0.92 | 0.915 |