

The following are the accuracies for the given 9 classifiers using the best parameter values to maximize the accuracy:

[illegible]

| Accuracy : Dataset 2 | | | | | | | | | | | | |
|-----------------------------|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|---|
| <u>Method</u> | <u>Best Parameters</u> | <u>Sampl e 1</u> | <u>Sampl e 2</u> | <u>Sampl e 3</u> | <u>Sampl e 4</u> | <u>Sampl e 5</u> | <u>Sampl e 6</u> | <u>Sampl e 7</u> | <u>Sampl e 8</u> | <u>Sampl e 9</u> | <u>Sampl e 10</u> | <u>Average of 10 samples</u> |
| Decision Tree | minbucket = 10 | 70 | 65 | 67.5 | 77.5 | 62.5 | 65 | 67.5 | 70 | 72.5 | 77.5 | 69.5 |
| Naïve Bayesian | | 72.5 | 72.5 | 70 | 82.5 | 70 | 62.5 | 77.5 | 67.5 | 65 | 65 | 70.5 |
| SVM | kernel = linear | 80 | 72.5 | 70 | 70 | 82.5 | 65 | 82.5 | 75 | 62.5 | 62.5 | 72.25 |
| kNN | k =2000 | 70 | 80 | 75 | 65 | 72.5 | 67.5 | 70 | 75 | 67.5 | 67.5 | 71 |
| Logistic Regression | Threshold = 0.80, family = "binomial" | 80 | 67.5 | 72.5 | 70 | 65 | 65 | 70 | 77.5 | 65 | 75 | 70.75 |
| Neural Network | size=9,maxit=1000,dec ay=0.1 | 82.5 | 75 | 62.5 | 67.5 | 65 | 72.5 | 75 | 67.5 | 70 | 80 | 71.75 |
| Bagging | mfinal=15,maxdepth= 5 | 80 | 67.5 | 72.5 | 75 | 85 | 72.5 | 62.5 | 72.5 | 77.5 | 67.5 | 73.25 |
| Random Forest | | 67.5 | 70 | 80 | 62.5 | 65 | 62.5 | 67.5 | 77.5 | 75 | 82.5 | 71 |
| Boosting | mfinal=10, maxdepth =1 | 72.5 | 70 | 80 | 62.5 | 70 | 70 | 67.5 | 60 | 60 | 67.5 | 68 |

| Accuracy : Dataset 3 | | | | | | | | | | | | |
|-----------------------------|-------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------------|---|
| <u>Method</u> | <u>Best Parameters</u> | <u>Samp le 1</u> | <u>Samp le 2</u> | <u>Samp le 3</u> | <u>Samp le 4</u> | <u>Samp le 5</u> | <u>Samp le 6</u> | <u>Samp le 7</u> | <u>Samp le 8</u> | <u>Samp le 9</u> | <u>Samp le 10</u> | <u>Average of 10 samples</u> |
| Decision Tree | minbucket = 18 | 70 | 75 | 70 | 80 | 70 | 75 | 95 | 80 | 55 | 70 | 74 |
| Naïve Bayesian | | 60 | 75 | 75 | 80 | 70 | 80 | 45 | 60 | 70 | 60 | 67.5 |
| SVM | kernel = polynomial | 95 | 80 | 70 | 85 | 90 | 80 | 100 | 90 | 65 | 90 | 81.5 |
| kNN | k =15 | 65 | 75 | 80 | 85 | 90 | 85 | 100 | 85 | 60 | 85 | 81 |
| Logistic Regression | Threshold=0.55, family = "binomial" | 80 | 70 | 80 | 90 | 70 | 95 | 80 | 100 | 75 | 85 | 82.5 |
| Neural Network | size=4,maxit=2000,decay=0.001 | 75 | 85 | 75 | 75 | 90 | 75 | 85 | 75 | 75 | 90 | 80 |
| Bagging | mfinal=20,maxdepth=3 | 75 | 80 | 80 | 80 | 95 | 85 | 80 | 90 | 80 | 85 | 83 |
| Random Forest | | 85 | 85 | 75 | 85 | 75 | 80 | 75 | 70 | 80 | 80 | 79 |
| Boosting | mfinal=20, maxdepth =3 | 75 | 75 | 80 | 80 | 100 | 85 | 70 | 85 | 60 | 100 | 82.69152 |

| Accuracy : Dataset 4 | | | | | | | | | | | | |
|-----------------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|----------------------------------|
| Method | Best Parameters | Samp le 1 | Samp le 2 | Samp le 3 | Samp le 4 | Samp le 5 | Samp le 6 | Samp le 7 | Samp le 8 | Samp le 9 | Sampl e 10 | Average of 10 samples |
| Decision Tree | minbucket = 4 | 91.22 807 | 94.73 684 | 92.98 246 | 92.98 246 | 98.24 561 | 94.73 684 | 96.49 123 | 92.98 246 | 98.24 561 | 87.719 3 | 94.035 |
| Naïve Bayesian | | 89.47 368 | 87.71 93 | 96.49 123 | 92.98 246 | 94.73 684 | 89.47 368 | 94.73 684 | 92.98 246 | 92.98 246 | 92.982 46 | 92.456141 |
| SVM | kernel = radial | 98.24 561 | 96.49 123 | 100 | 96.49 123 | 100 | 94.73 684 | 100 | 96.49 123 | 100 | 98.245 61 | 98.07018 |
| kNN | k =3 | 91.22 807 | 80.70 175 | 71.92 982 | 82.45 614 | 84.21 053 | 66.66 667 | 73.68 421 | 70.17 544 | 84.21 053 | 82.456 14 | 78.77193 |
| Logistic Regression | Threshold=0.65, family = "binomial" | 96.49 123 | 98.24 561 | 91.22 807 | 98.24 561 | 96.49 123 | 96.49 123 | 96.49 123 | 92.98 246 | 94.73 684 | 98.245 61 | 95.96491 |
| Neural Network | size=5,maxit=500,decay=0.06 | 93 | 93 | 96.5 | 77 | 98 | 94.7 | 94.7 | 73.6 | 93 | 68.4 | 88.19 |
| Bagging | mfinal=10,maxdepth=3 | 94.73 68 | 98.24 561 | 100 | 94.73 684 | 96.49 123 | 91.22 807 | 96.49 123 | 89.47 368 | 94.73 68 | 96.491 23 | 95.26316 |
| Random Forest | | 98.24 | 96.49 | 96.49 | 98.24 | 94.73 | 100 | 94.73 | 80 | 93 | 93 | 94.492 |
| Boosting | mfinal=10, maxdepth =3 | 96.49 123 | 98.24 561 | 100 | 92.98 246 | 100 | 92.98 246 | 98.24 561 | 92.98 246 | 100 | 98.245 61 | 88.2114 |

| Accuracy : Dataset 5 | | | | | | | | | | | | |
|-----------------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|----------------------------------|
| Method | Best Parameters | Samp le 1 | Samp le 2 | Samp le 3 | Samp le 4 | Samp le 5 | Samp le 6 | Samp le 7 | Samp le 8 | Samp le 9 | Samp le 10 | Average of 10 samples |
| Decision Tree | minbucket = 2 | 97.14 286 | 91.42 857 | 88.57 143 | 94.28 57 | 82.85 714 | 88.57 143 | 80 | 94.28 571 | 82.85 714 | 97.142 86 | 89.71429 |
| Naïve Bayesian | | 85.71 429 | 94.28 571 | 85.71 429 | 88.57 143 | 91.42 857 | 97.14 286 | 88.57 143 | 85.71 429 | 91.42 857 | 94.285 71 | 90.28571 |
| SVM | kernel = radial | 94.28 571 | 97.14 286 | 88.57 143 | 91.42 857 | 97.14 286 | 97.14 286 | 94.28 571 | 97.14 286 | 82.85 714 | 91.428 57 | 93.14286 |
| kNN | k =6 | 82.85 714 | 82.85 714 | 80 | 85.71 429 | 80 | 82.85 71 | 85.71 429 | 100 | 88.57 143 | 94.285 71 | 86.28571 |
| Logistic Regression | Threshold=0.15, family = "binomial" | 91.42 857 | 94.28 571 | 91.42 857 | 80 | 88.57 143 | 85.71 429 | 91.42 857 | 91.42 857 | 80 | 82.857 14 | 87.71429 |
| Neural Network | size=5,maxit=500,decay=0.06 | 94.44 | 95 | 80.5 | 91.67 | 91.67 | 91.67 | 86 | 97 | 100 | 91.67 | 91.962 |
| Bagging | mfinal=15,maxdepth=2 | 94.28 571 | 94.28 571 | 88.57 143 | 80 | 88.57 143 | 100 | 82.85 714 | 91.42 857 | 94.28 571 | 91.428 57 | 90.57143 |
| Random Forest | | 94.44 | 100 | 97.22 | 91.67 | 94.44 | 91.67 | 97.22 | 88.88 | 91.67 | 88.88 | 93.609 |
| Boosting | mfinal=10, maxdepth=3 | 97.14 286 | 97.14 286 | 94.28 571 | 85.71 429 | 85.71 429 | 94.28 571 | 85.71 429 | 88.57 143 | 94.28 571 | 94.285 71 | 89.19182 |