Decision Tree:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Accuracy | Precision |
| Repeat=10 | tuneLength=10 | 97.36842105 | 0.976190476 |
| Repeat=10 | tuneLength=3 | 92.10526316 | 0.923 |
| Repeat=3 | tuneLength=5 | 92.10526316 | 0.923 |

Perceptron:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Parameter3 | Accuracy | Precision |
| lifesign="minimal" | linear.output = FALSE | threshold = 0.1 | 23.68421053 | 0.18 |
| lifesign="minimal" | linear.output = FALSE | threshold = 0.5 | 23.68421053 | 0.18 |
| lifesign="minimal" | linear.output = TRUE | threshold = 0.5 | 97.36842105 | 0.96667 |

Neural Net:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Parameter3 | Accuracy | Precision |
| Neurons in hidden=6 | linear.output = FALSE | threshold = 0.1 | 23.68421053 | 0.18 |
| Neurons in hidden=6 | linear.output = TRUE | threshold = 0.1 | 92.10526316 | 0.9166 |
| Neurons in hidden=2 | linear.output = TRUE | threshold = 0.1 | 65.78947368 | 0.80303 |

Deep Learning:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Parameter3 | Parameter4 | Accuracy | Precision |
| Number of hidden layers=5 | Nodes in hidden layers=6,7,2,5,6 | linear.output = TRUE | threshold = 0.1 | 86.8421 | 0.88095 |
| Number of hidden layers=3 | Nodes in hidden layers=6,7,2 | linear.output = TRUE | threshold = 0.5 | 65.7895 | 0.8 |
| Number of hidden layers=6 | Nodes in hidden layers=6,7,2,4,3,2 | linear.output = TRUE | threshold = 0.5 | 76.3158 | 0.833 |

SVM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Parameter3 | Accuracy | Precision |
| kernel="radial" | cost=1 | gamma=0.5 | 95 | 0.94794 |
| kernel="radial" | cost=2 | gamma=0.02 | 95.10526316 | 0.95596 |
| kernel="radial" | 0 | 0 | 95.26315789 | 0.95373 |

naïve Bayes:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Accuracy | Precision |
| usekernel=FALSE | number=5 | 76.7 | 0.74365079 |
| usekernel=TRUE | number=10 | 97.36842105 | 0.966666667 |

Bagging:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Accuracy | Precision |
| maxdepth = 1 | mfinal = 1 | 76.57895 | 0.8055 |
| maxdepth = 10 | mfinal = 1 | 77.10526 | 0.759777 |
| maxdepth = 8 | mfinal = 2 | 90.52632 | 0.9141766 |

Random Forest:

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Accuracy | Precision |
| ntree = 8 | importance = TRUE | 82.36842 | 0.8303247 |
| ntree = 8 | importance = FALSE | 79.73684 | 0.8018609 |
| ntree = 5 | importance = FALSE | 82.63158 | 0.8331242 |
| ntree = 5 | importance = TRUE | 80.78947 | 0.8251712 |

AdaBoost

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter 1 | Parameter2 | Parameter3 | Accuracy | Precision |
| iter = 30 | nu =1 | bag.frac = 0.5 | 95 | 0.95188 |
| iter = 3 | nu =1 | bag.frac = 0.5 | 90 | 0.90502 |
| iter = 20 | nu =2 | bag.frac = 0.5 | 94.47368 | 0.94408 |

Gradient Boosting

|  |  |  |
| --- | --- | --- |
| Parameter1 | Accuracy | Precision |
| n.trees = 350 | 93.15789 | 0.932 |
| n.trees = 30 | 79.21053 | 0.832 |
| n.trees = 100 | 82.10526 | 0.8618 |