Decision Tree Results:

Information Gain Heuristics:

Before Pruning Accuracy on Test DataSet1: 0.642

Before Pruning Accuracy on Test DataSet2: 0.6133333333333333

|  |  |  |  |
| --- | --- | --- | --- |
| L | K | Accuracy on Test Dataset1 after Pruning | Accuracy on Test DataSet2 after Pruning |
| 5 | 10 | 0.642 | 0.6166 |
| 5 | 15 | 0.652 | 0.61333 |
| 10 | 10 | 0.652 | 0.64 |
| 10 | 15 | 0.648 | 0.608 |
| 15 | 15 | 0.645 | 0.6266 |
| 15 | 20 | 0.653 | 0.635 |
| 20 | 20 | 0.642 | 0.63 |
| 25 | 25 | 0.65 | 0.6266 |
| 30 | 15 | 0.6525 | 0.61 |
| 30 | 30 | 0.6375 | 0.6216 |

Variance impurity heuristics:

Before Pruning Accuracy on Test DataSet1: 0.642

Before Pruning Accuracy on Test DataSet2: 0.6133333333333333

|  |  |  |  |
| --- | --- | --- | --- |
| L | K | Accuracy on Test Dataset1 after Pruning | Accuracy on Test DataSet2 after Pruning |
| 5 | 10 | 0.645 | 0.6216 |
| 5 | 15 | 0.642 | 0.6266 |
| 10 | 10 | 0.6475 | 0.61833 |
| 10 | 15 | 0.6455 | 0.625 |
| 15 | 15 | 0.6585 | 0.63333 |
| 15 | 20 | 0.6525 | 0.6333 |
| 20 | 20 | 0.6485 | 0.625 |
| 25 | 25 | 0.6435 | 0.651 |
| 30 | 15 | 0.6645 | 0.6266 |
| 30 | 30 | 0.653 | 0.636666 |