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Machine Learning Assignment 1

DataSet 1:

Information Gain Heuristic

Accuracy BEFORE pruning: 75.85%

L	K	Accuracy After Pruning
1000	10	76.8%
1000	1	76.8%
10	10	76.9%
20	30	76.8%
10	30	76.9%
10	50	76.9%
50	10	76.8%
500	200	76.8%
500	500	76.8%
1	1	75.85%

Variance Impurity Heuristic

Accuracy BEFORE pruning: 76.64999999999999%

L	K	Accuracy After Pruning
1000	10	77.64999999999999%
1000	1	77.64999999999999%
10	10	76.64999999999999%
20	30	77.64999999999999%
10	30	76.64999999999999%
10	50	76.64999999999999%
50	10	76.64999999999999%
500	200	77.64999999999999%
500	500	76.64999999999999%
1	1	76.64999999999999%

DataSet 2:**Information Gain Heuristic**

Accuracy BEFORE pruning: 72.33333333333334%

L	K	Accuracy After Pruning
1000	10	74.83333333333333%
1000	1	74.83333333333333%
10	10	73.5%
20	30	74.83333333333333%
10	30	73.5%
10	50	72.33333333333334%
50	10	74.83333333333333%
500	200	74.83333333333333%
500	500	74.83333333333333%
1	1	72.33333333333334%

Variance Impurity Heuristic

Accuracy BEFORE pruning: 72.5%

L	K	Accuracy After Pruning
1000	10	73.0%
1000	1	73.0%
10	10	73.0%
20	30	73.0%
10	30	72.5%
10	50	72.5%
50	10	73.0%
500	200	73.0%
500	500	73.0%
1	1	72.5%