

Machine Learning Assignment 1 Report

DATASET 1: WITHOUT PRUNING

Accuracy using Information Gain on validation set	: 75.9 %
Accuracy using Variance Gain on validation set	: 67.25 %
Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

DATASET 1: WITH PRUNING:

L=3,K=9

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=1,K=20

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=4,K=5

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=40,K=6

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=9,K=23

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=13,K=39

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=50,K=3

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=25,K=50

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=10,K=10

Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

L=20,K=25	
Accuracy using Information Gain on Test set	: 75.85 %
Accuracy using variance Gain on Test set	: 68.05 %

DATASET 2: WITHOUT PRUNING

Accuracy using Information Gain on validation set	: 77.17 %
Accuracy using Variance Gain on validation set	: 65.67 %
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

DATASET 2: WITH PRUNING:

L=10,K=10	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=20,K=25	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=25,K=50	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=50,K=3	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=,13K=39	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=9,K=23	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=40,K=6	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=4,K=5	
Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=1,K=20

Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %

L=3,K=9

Accuracy using Information Gain on Test set	: 72.33 %
Accuracy using variance Gain on Test set	: 68.0 %