1, 10 times with different L,K

Collusion: with bigger L and K, the accuracy is slightly higher.

(1)java -jar decisionTree.jar 10 20 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 65.83333333333333%

After Post Prun the accurancy of varImp is 73.33333333333333%

(2) java -jar decisionTree.jar 30 4 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 63.5%

After Post Prun the accurancy of varImp is 75.5%

(3) java -jar decisionTree.jar 50 64 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 65.83333333333333%

After Post Prun the accurancy of varImp is 73.5%

(4) java -jar decisionTree.jar 75 43 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 65.83333333333333%

After Post Prun the accurancy of varImp is 75.5%

(5) java -jar decisionTree.jar 28 90 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 63.5%

After Post Prun the accurancy of varImp is 73.5%

(6) java -jar decisionTree.jar 123 230 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 63.5%

After Post Prun the accurancy of varImp is 73.5%

(7) java -jar decisionTree.jar 250 300 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 65.83333333333333%

After Post Prun the accurancy of varImp is 75.5%

(8) java -jar decisionTree.jar 1250 3000 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 63.5%

After Post Prun the accurancy of varImp is 75.5%

(9) java -jar decisionTree.jar 4 8 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 62.66666666666667%

After Post Prun the accurancy of varImp is 73.5%

(10) java -jar decisionTree.jar 1 2 training\_set.csv validation\_set.csv test\_set.csv no

The accurancy of infoGain is 62.66666666666667%

The accurancy of varImp is 72.5%

After Post Prun the accurancy of infoGain is 62.66666666666667%

After Post Prun the accurancy of varImp is 72.5%

2, print 4 trees:

Now printing tree using infoGain

XO = 0 :

| XM = 0 :

| | XC = 0 :

| | | XR = 0 :

| | | | XS = 0 : 0

| | | | XS = 1 :

| | | | | XD = 0 :

| | | | | | XK = 0 :

| | | | | | | XJ = 0 : 1

| | | | | | | XJ = 1 : 0

| | | | | | XK = 1 :

| | | | | | | XT = 0 : 0

| | | | | | | XT = 1 : 1

| | | | | XD = 1 :

| | | | | | XB = 0 : 0

| | | | | | XB = 1 : 0

| | | XR = 1 : 0

| | XC = 1 :

| | | XU = 0 :

| | | | XT = 0 : 1

| | | | XT = 1 : 0

| | | XU = 1 : 0

| XM = 1 :

| | XB = 0 :

| | | XF = 0 :

| | | | XD = 0 :

| | | | | XE = 0 :

| | | | | | XH = 0 : 0

| | | | | | XH = 1 :

| | | | | | | XT = 0 : 0

| | | | | | | XT = 1 : 1

| | | | | XE = 1 :

| | | | | | XH = 0 : 1

| | | | | | XH = 1 : 1

| | | | XD = 1 :

| | | | | XH = 0 : 0

| | | | | XH = 1 :

| | | | | | XI = 0 : 0

| | | | | | XI = 1 : 0

| | | XF = 1 :

| | | | XS = 0 :

| | | | | XQ = 0 :

| | | | | | XU = 0 : 1

| | | | | | XU = 1 : 0

| | | | | XQ = 1 : 1

| | | | XS = 1 :

| | | | | XR = 0 :

| | | | | | XE = 0 :

| | | | | | | XL = 0 : 1

| | | | | | | XL = 1 : 1

| | | | | | XE = 1 : 1

| | | | | XR = 1 :

| | | | | | XI = 0 : 0

| | | | | | XI = 1 :

| | | | | | | XQ = 0 : 1

| | | | | | | XQ = 1 :

| | | | | | | | XE = 0 : 0

| | | | | | | | XE = 1 : 1

| | XB = 1 :

| | | XP = 0 :

| | | | XT = 0 :

| | | | | XL = 0 : 1

| | | | | XL = 1 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 : 0

| | | | XT = 1 : 0

| | | XP = 1 :

| | | | XH = 0 :

| | | | | XG = 0 : 1

| | | | | XG = 1 : 0

| | | | XH = 1 : 0

XO = 1 :

| XI = 0 :

| | XM = 0 :

| | | XQ = 0 :

| | | | XN = 0 :

| | | | | XC = 0 :

| | | | | | XJ = 0 :

| | | | | | | XS = 0 : 0

| | | | | | | XS = 1 : 0

| | | | | | XJ = 1 : 1

| | | | | XC = 1 : 1

| | | | XN = 1 : 0

| | | XQ = 1 :

| | | | XJ = 0 :

| | | | | XD = 0 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 : 0

| | | | | XD = 1 :

| | | | | | XE = 0 : 1

| | | | | | XE = 1 : 1

| | | | XJ = 1 :

| | | | | XH = 0 :

| | | | | | XC = 0 : 0

| | | | | | XC = 1 : 0

| | | | | XH = 1 : 1

| | XM = 1 :

| | | XL = 0 :

| | | | XB = 0 :

| | | | | XJ = 0 :

| | | | | | XC = 0 : 0

| | | | | | XC = 1 : 1

| | | | | XJ = 1 : 0

| | | | XB = 1 :

| | | | | XN = 0 :

| | | | | | XC = 0 : 1

| | | | | | XC = 1 : 1

| | | | | XN = 1 :

| | | | | | XK = 0 :

| | | | | | | XR = 0 : 0

| | | | | | | XR = 1 : 1

| | | | | | XK = 1 : 0

| | | XL = 1 :

| | | | XS = 0 : 0

| | | | XS = 1 :

| | | | | XC = 0 : 0

| | | | | XC = 1 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 : 1

| XI = 1 :

| | XT = 0 :

| | | XH = 0 :

| | | | XP = 0 :

| | | | | XU = 0 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 : 1

| | | | | XU = 1 : 0

| | | | XP = 1 :

| | | | | XE = 0 :

| | | | | | XG = 0 :

| | | | | | | XB = 0 : 0

| | | | | | | XB = 1 : 1

| | | | | | XG = 1 : 1

| | | | | XE = 1 :

| | | | | | XQ = 0 : 1

| | | | | | XQ = 1 : 1

| | | XH = 1 :

| | | | XJ = 0 :

| | | | | XC = 0 :

| | | | | | XP = 0 : 1

| | | | | | XP = 1 :

| | | | | | | XE = 0 : 0

| | | | | | | XE = 1 : 1

| | | | | XC = 1 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 : 0

| | | | XJ = 1 :

| | | | | XF = 0 :

| | | | | | XB = 0 :

| | | | | | | XN = 0 : 0

| | | | | | | XN = 1 : 1

| | | | | | XB = 1 : 1

| | | | | XF = 1 : 1

| | XT = 1 :

| | | XS = 0 :

| | | | XQ = 0 :

| | | | | XK = 0 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 :

| | | | | | | XP = 0 : 0

| | | | | | | XP = 1 : 1

| | | | | XK = 1 :

| | | | | | XE = 0 : 1

| | | | | | XE = 1 : 1

| | | | XQ = 1 :

| | | | | XN = 0 : 1

| | | | | XN = 1 :

| | | | | | XL = 0 : 1

| | | | | | XL = 1 : 1

| | | XS = 1 :

| | | | XL = 0 :

| | | | | XD = 0 :

| | | | | | XH = 0 : 1

| | | | | | XH = 1 : 1

| | | | | XD = 1 : 0

| | | | XL = 1 :

| | | | | XE = 0 :

| | | | | | XD = 0 : 0

| | | | | | XD = 1 : 1

| | | | | XE = 1 : 0

Now printing tree using varImp

XO = 0 :

| XM = 0 :

| | XF = 0 :

| | | XB = 0 :

| | | | XG = 0 : 0

| | | | XG = 1 :

| | | | | XD = 0 :

| | | | | | XS = 0 : 0

| | | | | | XS = 1 :

| | | | | | | XC = 0 : 1

| | | | | | | XC = 1 :

| | | | | | | | XH = 0 : 0

| | | | | | | | XH = 1 : 1

| | | | | XD = 1 :

| | | | | | XE = 0 : 0

| | | | | | XE = 1 :

| | | | | | | XK = 0 : 0

| | | | | | | XK = 1 : 1

| | | XB = 1 :

| | | | XD = 0 : 0

| | | | XD = 1 :

| | | | | XI = 0 : 0

| | | | | XI = 1 :

| | | | | | XG = 0 : 1

| | | | | | XG = 1 : 0

| | XF = 1 : 0

| XM = 1 :

| | XB = 0 :

| | | XD = 0 :

| | | | XG = 0 :

| | | | | XF = 0 : 0

| | | | | XF = 1 :

| | | | | | XJ = 0 :

| | | | | | | XN = 0 : 1

| | | | | | | XN = 1 :

| | | | | | | | XE = 0 :

| | | | | | | | | XK = 0 : 0

| | | | | | | | | XK = 1 : 1

| | | | | | | | XE = 1 : 0

| | | | | | XJ = 1 :

| | | | | | | XC = 0 :

| | | | | | | | XT = 0 :

| | | | | | | | | XL = 0 :

| | | | | | | | | | XE = 0 :

| | | | | | | | | | | XI = 0 : 0

| | | | | | | | | | | XI = 1 : 1

| | | | | | | | | | XE = 1 : 1

| | | | | | | | | XL = 1 : 0

| | | | | | | | XT = 1 : 1

| | | | | | | XC = 1 : 1

| | | | XG = 1 :

| | | | | XU = 0 : 1

| | | | | XU = 1 :

| | | | | | XI = 0 : 0

| | | | | | XI = 1 : 1

| | | XD = 1 :

| | | | XC = 0 :

| | | | | XF = 0 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 :

| | | | | | | XP = 0 :

| | | | | | | | XS = 0 : 0

| | | | | | | | XS = 1 : 1

| | | | | | | XP = 1 : 0

| | | | | XF = 1 :

| | | | | | XG = 0 :

| | | | | | | XP = 0 : 1

| | | | | | | XP = 1 :

| | | | | | | | XL = 0 : 0

| | | | | | | | XL = 1 : 1

| | | | | | XG = 1 :

| | | | | | | XQ = 0 : 0

| | | | | | | XQ = 1 :

| | | | | | | | XR = 0 : 1

| | | | | | | | XR = 1 : 0

| | | | XC = 1 : 0

| | XB = 1 :

| | | XI = 0 : 0

| | | XI = 1 :

| | | | XC = 0 :

| | | | | XK = 0 :

| | | | | | XP = 0 : 1

| | | | | | XP = 1 :

| | | | | | | XS = 0 :

| | | | | | | | XG = 0 : 1

| | | | | | | | XG = 1 :

| | | | | | | | | XF = 0 : 0

| | | | | | | | | XF = 1 : 1

| | | | | | | XS = 1 : 0

| | | | | XK = 1 : 0

| | | | XC = 1 : 0

XO = 1 :

| XI = 0 :

| | XM = 0 :

| | | XQ = 0 :

| | | | XF = 0 :

| | | | | XH = 0 :

| | | | | | XB = 0 : 0

| | | | | | XB = 1 :

| | | | | | | XC = 0 : 1

| | | | | | | XC = 1 : 0

| | | | | XH = 1 : 1

| | | | XF = 1 : 0

| | | XQ = 1 :

| | | | XJ = 0 :

| | | | | XN = 0 :

| | | | | | XP = 0 : 1

| | | | | | XP = 1 :

| | | | | | | XB = 0 :

| | | | | | | | XF = 0 : 0

| | | | | | | | XF = 1 : 1

| | | | | | | XB = 1 : 0

| | | | | XN = 1 : 0

| | | | XJ = 1 :

| | | | | XH = 0 :

| | | | | | XL = 0 : 0

| | | | | | XL = 1 : 1

| | | | | XH = 1 :

| | | | | | XU = 0 : 1

| | | | | | XU = 1 :

| | | | | | | XE = 0 : 1

| | | | | | | XE = 1 : 0

| | XM = 1 :

| | | XQ = 0 :

| | | | XF = 0 :

| | | | | XL = 0 :

| | | | | | XC = 0 : 1

| | | | | | XC = 1 :

| | | | | | | XH = 0 : 1

| | | | | | | XH = 1 :

| | | | | | | | XU = 0 :

| | | | | | | | | XB = 0 :

| | | | | | | | | | XD = 0 : 1

| | | | | | | | | | XD = 1 : 0

| | | | | | | | | XB = 1 : 0

| | | | | | | | XU = 1 : 1

| | | | | XL = 1 :

| | | | | | XC = 0 :

| | | | | | | XB = 0 : 0

| | | | | | | XB = 1 :

| | | | | | | | XP = 0 : 0

| | | | | | | | XP = 1 : 1

| | | | | | XC = 1 : 1

| | | | XF = 1 : 0

| | | XQ = 1 : 0

| XI = 1 :

| | XT = 0 :

| | | XH = 0 :

| | | | XP = 0 :

| | | | | XF = 0 : 0

| | | | | XF = 1 :

| | | | | | XQ = 0 :

| | | | | | | XK = 0 : 1

| | | | | | | XK = 1 :

| | | | | | | | XC = 0 : 0

| | | | | | | | XC = 1 : 1

| | | | | | XQ = 1 :

| | | | | | | XK = 0 : 0

| | | | | | | XK = 1 : 1

| | | | XP = 1 :

| | | | | XS = 0 :

| | | | | | XD = 0 :

| | | | | | | XC = 0 :

| | | | | | | | XJ = 0 :

| | | | | | | | | XN = 0 : 0

| | | | | | | | | XN = 1 : 1

| | | | | | | | XJ = 1 :

| | | | | | | | | XB = 0 : 0

| | | | | | | | | XB = 1 :

| | | | | | | | | | XG = 0 : 1

| | | | | | | | | | XG = 1 : 0

| | | | | | | XC = 1 : 0

| | | | | | XD = 1 :

| | | | | | | XK = 0 :

| | | | | | | | XF = 0 :

| | | | | | | | | XC = 0 : 1

| | | | | | | | | XC = 1 : 0

| | | | | | | | XF = 1 : 1

| | | | | | | XK = 1 : 0

| | | | | XS = 1 : 1

| | | XH = 1 :

| | | | XJ = 0 :

| | | | | XC = 0 :

| | | | | | XN = 0 : 1

| | | | | | XN = 1 :

| | | | | | | XF = 0 :

| | | | | | | | XG = 0 : 1

| | | | | | | | XG = 1 : 0

| | | | | | | XF = 1 : 0

| | | | | XC = 1 :

| | | | | | XM = 0 : 0

| | | | | | XM = 1 :

| | | | | | | XF = 0 :

| | | | | | | | XR = 0 : 1

| | | | | | | | XR = 1 : 0

| | | | | | | XF = 1 : 1

| | | | XJ = 1 :

| | | | | XS = 0 : 1

| | | | | XS = 1 :

| | | | | | XG = 0 :

| | | | | | | XB = 0 : 0

| | | | | | | XB = 1 :

| | | | | | | | XD = 0 : 1

| | | | | | | | XD = 1 :

| | | | | | | | | XE = 0 : 0

| | | | | | | | | XE = 1 : 1

| | | | | | XG = 1 :

| | | | | | | XC = 0 : 1

| | | | | | | XC = 1 :

| | | | | | | | XD = 0 : 1

| | | | | | | | XD = 1 : 0

| | XT = 1 :

| | | XS = 0 :

| | | | XQ = 0 :

| | | | | XK = 0 :

| | | | | | XC = 0 :

| | | | | | | XR = 0 :

| | | | | | | | XH = 0 :

| | | | | | | | | XE = 0 : 0

| | | | | | | | | XE = 1 : 1

| | | | | | | | XH = 1 : 1

| | | | | | | XR = 1 :

| | | | | | | | XB = 0 :

| | | | | | | | | XD = 0 : 0

| | | | | | | | | XD = 1 : 1

| | | | | | | | XB = 1 : 0

| | | | | | XC = 1 : 1

| | | | | XK = 1 :

| | | | | | XD = 0 :

| | | | | | | XF = 0 : 0

| | | | | | | XF = 1 : 1

| | | | | | XD = 1 : 0

| | | | XQ = 1 :

| | | | | XM = 0 :

| | | | | | XN = 0 :

| | | | | | | XU = 0 : 1

| | | | | | | XU = 1 : 0

| | | | | | XN = 1 :

| | | | | | | XP = 0 :

| | | | | | | | XB = 0 :

| | | | | | | | | XF = 0 : 0

| | | | | | | | | XF = 1 : 1

| | | | | | | | XB = 1 : 1

| | | | | | | XP = 1 : 1

| | | | | XM = 1 : 0

| | | XS = 1 :

| | | | XL = 0 :

| | | | | XD = 0 :

| | | | | | XU = 0 : 1

| | | | | | XU = 1 :

| | | | | | | XF = 0 :

| | | | | | | | XG = 0 :

| | | | | | | | | XH = 0 : 0

| | | | | | | | | XH = 1 : 1

| | | | | | | | XG = 1 : 0

| | | | | | | XF = 1 :

| | | | | | | | XE = 0 : 1

| | | | | | | | XE = 1 :

| | | | | | | | | XC = 0 : 1

| | | | | | | | | XC = 1 : 0

| | | | | XD = 1 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 : 1

| | | | XL = 1 :

| | | | | XE = 0 :

| | | | | | XK = 0 :

| | | | | | | XG = 0 : 1

| | | | | | | XG = 1 :

| | | | | | | | XP = 0 : 0

| | | | | | | | XP = 1 : 1

| | | | | | XK = 1 : 0

| | | | | XE = 1 :

| | | | | | XM = 0 :

| | | | | | | XG = 0 : 0

| | | | | | | XG = 1 : 1

| | | | | | XM = 1 : 0

Now printing tree using infoGain after post prun

XO = 0 :

| XM = 0 :

| | XC = 0 :

| | | XR = 0 :

| | | | XS = 0 : 0

| | | | XS = 1 :

| | | | | XD = 0 :

| | | | | | XK = 0 : 0

| | | | | | XK = 1 : 1

| | | | | XD = 1 :

| | | | | | XB = 0 : 0

| | | | | | XB = 1 : 0

| | | XR = 1 : 0

| | XC = 1 :

| | | XU = 0 :

| | | | XT = 0 : 1

| | | | XT = 1 : 0

| | | XU = 1 : 0

| XM = 1 :

| | XB = 0 :

| | | XF = 0 :

| | | | XD = 0 :

| | | | | XE = 0 :

| | | | | | XH = 0 : 0

| | | | | | XH = 1 : 1

| | | | | XE = 1 :

| | | | | | XH = 0 : 1

| | | | | | XH = 1 : 1

| | | | XD = 1 :

| | | | | XH = 0 : 0

| | | | | XH = 1 :

| | | | | | XI = 0 : 0

| | | | | | XI = 1 : 0

| | | XF = 1 :

| | | | XS = 0 :

| | | | | XQ = 0 :

| | | | | | XU = 0 : 1

| | | | | | XU = 1 : 0

| | | | | XQ = 1 : 1

| | | | XS = 1 :

| | | | | XR = 0 :

| | | | | | XE = 0 : 1

| | | | | | XE = 1 : 1

| | | | | XR = 1 :

| | | | | | XI = 0 : 0

| | | | | | XI = 1 : 1

| | XB = 1 :

| | | XP = 0 :

| | | | XT = 0 :

| | | | | XL = 0 : 1

| | | | | XL = 1 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 : 0

| | | | XT = 1 : 0

| | | XP = 1 :

| | | | XH = 0 :

| | | | | XG = 0 : 1

| | | | | XG = 1 : 0

| | | | XH = 1 : 0

XO = 1 :

| XI = 0 :

| | XM = 0 :

| | | XQ = 0 :

| | | | XN = 0 :

| | | | | XC = 0 :

| | | | | | XJ = 0 : 1

| | | | | | XJ = 1 : 1

| | | | | XC = 1 : 1

| | | | XN = 1 : 0

| | | XQ = 1 :

| | | | XJ = 0 :

| | | | | XD = 0 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 : 0

| | | | | XD = 1 :

| | | | | | XE = 0 : 1

| | | | | | XE = 1 : 1

| | | | XJ = 1 :

| | | | | XH = 0 :

| | | | | | XC = 0 : 0

| | | | | | XC = 1 : 0

| | | | | XH = 1 : 1

| | XM = 1 :

| | | XL = 0 :

| | | | XB = 0 :

| | | | | XJ = 0 :

| | | | | | XC = 0 : 0

| | | | | | XC = 1 : 1

| | | | | XJ = 1 : 0

| | | | XB = 1 :

| | | | | XN = 0 :

| | | | | | XC = 0 : 1

| | | | | | XC = 1 : 1

| | | | | XN = 1 :

| | | | | | XK = 0 : 1

| | | | | | XK = 1 : 0

| | | XL = 1 :

| | | | XS = 0 : 0

| | | | XS = 1 :

| | | | | XC = 0 : 0

| | | | | XC = 1 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 : 1

| XI = 1 :

| | XT = 0 :

| | | XH = 0 :

| | | | XP = 0 :

| | | | | XU = 0 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 : 1

| | | | | XU = 1 : 0

| | | | XP = 1 :

| | | | | XE = 0 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 : 1

| | | | | XE = 1 :

| | | | | | XQ = 0 : 1

| | | | | | XQ = 1 : 1

| | | XH = 1 :

| | | | XJ = 0 :

| | | | | XC = 0 :

| | | | | | XP = 0 : 1

| | | | | | XP = 1 : 1

| | | | | XC = 1 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 : 0

| | | | XJ = 1 :

| | | | | XF = 0 :

| | | | | | XB = 0 : 1

| | | | | | XB = 1 : 1

| | | | | XF = 1 : 1

| | XT = 1 :

| | | XS = 0 :

| | | | XQ = 0 :

| | | | | XK = 0 :

| | | | | | XR = 0 : 1

| | | | | | XR = 1 : 1

| | | | | XK = 1 :

| | | | | | XE = 0 : 1

| | | | | | XE = 1 : 1

| | | | XQ = 1 :

| | | | | XN = 0 : 1

| | | | | XN = 1 :

| | | | | | XL = 0 : 1

| | | | | | XL = 1 : 1

| | | XS = 1 :

| | | | XL = 0 :

| | | | | XD = 0 :

| | | | | | XH = 0 : 1

| | | | | | XH = 1 : 1

| | | | | XD = 1 : 0

| | | | XL = 1 :

| | | | | XE = 0 :

| | | | | | XD = 0 : 0

| | | | | | XD = 1 : 1

| | | | | XE = 1 : 0

Now printing tree using varImp after post prun

XO = 0 :

| XM = 0 :

| | XF = 0 :

| | | XB = 0 :

| | | | XG = 0 : 0

| | | | XG = 1 :

| | | | | XD = 0 :

| | | | | | XS = 0 : 0

| | | | | | XS = 1 :

| | | | | | | XC = 0 : 1

| | | | | | | XC = 1 :

| | | | | | | | XH = 0 : 0

| | | | | | | | XH = 1 : 1

| | | | | XD = 1 :

| | | | | | XE = 0 : 0

| | | | | | XE = 1 :

| | | | | | | XK = 0 : 0

| | | | | | | XK = 1 : 1

| | | XB = 1 :

| | | | XD = 0 : 0

| | | | XD = 1 :

| | | | | XI = 0 : 0

| | | | | XI = 1 :

| | | | | | XG = 0 : 1

| | | | | | XG = 1 : 0

| | XF = 1 : 0

| XM = 1 :

| | XB = 0 :

| | | XD = 0 :

| | | | XG = 0 :

| | | | | XF = 0 : 0

| | | | | XF = 1 :

| | | | | | XJ = 0 :

| | | | | | | XN = 0 : 1

| | | | | | | XN = 1 :

| | | | | | | | XE = 0 : 1

| | | | | | | | XE = 1 : 0

| | | | | | XJ = 1 :

| | | | | | | XC = 0 :

| | | | | | | | XT = 0 : 1

| | | | | | | | XT = 1 : 1

| | | | | | | XC = 1 : 1

| | | | XG = 1 :

| | | | | XU = 0 : 1

| | | | | XU = 1 :

| | | | | | XI = 0 : 0

| | | | | | XI = 1 : 1

| | | XD = 1 :

| | | | XC = 0 :

| | | | | XF = 0 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 :

| | | | | | | XP = 0 :

| | | | | | | | XS = 0 : 0

| | | | | | | | XS = 1 : 1

| | | | | | | XP = 1 : 0

| | | | | XF = 1 :

| | | | | | XG = 0 :

| | | | | | | XP = 0 : 1

| | | | | | | XP = 1 :

| | | | | | | | XL = 0 : 0

| | | | | | | | XL = 1 : 1

| | | | | | XG = 1 :

| | | | | | | XQ = 0 : 0

| | | | | | | XQ = 1 :

| | | | | | | | XR = 0 : 1

| | | | | | | | XR = 1 : 0

| | | | XC = 1 : 0

| | XB = 1 :

| | | XI = 0 : 0

| | | XI = 1 :

| | | | XC = 0 :

| | | | | XK = 0 :

| | | | | | XP = 0 : 1

| | | | | | XP = 1 :

| | | | | | | XS = 0 :

| | | | | | | | XG = 0 : 1

| | | | | | | | XG = 1 : 1

| | | | | | | XS = 1 : 0

| | | | | XK = 1 : 0

| | | | XC = 1 : 0

XO = 1 :

| XI = 0 :

| | XM = 0 :

| | | XQ = 0 :

| | | | XF = 0 :

| | | | | XH = 0 :

| | | | | | XB = 0 : 0

| | | | | | XB = 1 :

| | | | | | | XC = 0 : 1

| | | | | | | XC = 1 : 0

| | | | | XH = 1 : 1

| | | | XF = 1 : 0

| | | XQ = 1 :

| | | | XJ = 0 :

| | | | | XN = 0 :

| | | | | | XP = 0 : 1

| | | | | | XP = 1 :

| | | | | | | XB = 0 :

| | | | | | | | XF = 0 : 0

| | | | | | | | XF = 1 : 1

| | | | | | | XB = 1 : 0

| | | | | XN = 1 : 0

| | | | XJ = 1 :

| | | | | XH = 0 :

| | | | | | XL = 0 : 0

| | | | | | XL = 1 : 1

| | | | | XH = 1 :

| | | | | | XU = 0 : 1

| | | | | | XU = 1 :

| | | | | | | XE = 0 : 1

| | | | | | | XE = 1 : 0

| | XM = 1 :

| | | XQ = 0 :

| | | | XF = 0 :

| | | | | XL = 0 :

| | | | | | XC = 0 : 1

| | | | | | XC = 1 :

| | | | | | | XH = 0 : 1

| | | | | | | XH = 1 :

| | | | | | | | XU = 0 : 0

| | | | | | | | XU = 1 : 1

| | | | | XL = 1 :

| | | | | | XC = 0 :

| | | | | | | XB = 0 : 0

| | | | | | | XB = 1 :

| | | | | | | | XP = 0 : 0

| | | | | | | | XP = 1 : 1

| | | | | | XC = 1 : 1

| | | | XF = 1 : 0

| | | XQ = 1 : 0

| XI = 1 :

| | XT = 0 :

| | | XH = 0 :

| | | | XP = 0 :

| | | | | XF = 0 : 0

| | | | | XF = 1 :

| | | | | | XQ = 0 :

| | | | | | | XK = 0 : 1

| | | | | | | XK = 1 :

| | | | | | | | XC = 0 : 0

| | | | | | | | XC = 1 : 1

| | | | | | XQ = 1 :

| | | | | | | XK = 0 : 0

| | | | | | | XK = 1 : 1

| | | | XP = 1 :

| | | | | XS = 0 :

| | | | | | XD = 0 :

| | | | | | | XC = 0 :

| | | | | | | | XJ = 0 : 1

| | | | | | | | XJ = 1 : 0

| | | | | | | XC = 1 : 0

| | | | | | XD = 1 :

| | | | | | | XK = 0 :

| | | | | | | | XF = 0 : 1

| | | | | | | | XF = 1 : 1

| | | | | | | XK = 1 : 0

| | | | | XS = 1 : 1

| | | XH = 1 :

| | | | XJ = 0 :

| | | | | XC = 0 :

| | | | | | XN = 0 : 1

| | | | | | XN = 1 :

| | | | | | | XF = 0 :

| | | | | | | | XG = 0 : 1

| | | | | | | | XG = 1 : 0

| | | | | | | XF = 1 : 0

| | | | | XC = 1 :

| | | | | | XM = 0 : 0

| | | | | | XM = 1 :

| | | | | | | XF = 0 :

| | | | | | | | XR = 0 : 1

| | | | | | | | XR = 1 : 0

| | | | | | | XF = 1 : 1

| | | | XJ = 1 :

| | | | | XS = 0 : 1

| | | | | XS = 1 :

| | | | | | XG = 0 :

| | | | | | | XB = 0 : 0

| | | | | | | XB = 1 :

| | | | | | | | XD = 0 : 1

| | | | | | | | XD = 1 : 1

| | | | | | XG = 1 :

| | | | | | | XC = 0 : 1

| | | | | | | XC = 1 :

| | | | | | | | XD = 0 : 1

| | | | | | | | XD = 1 : 0

| | XT = 1 :

| | | XS = 0 :

| | | | XQ = 0 :

| | | | | XK = 0 :

| | | | | | XC = 0 :

| | | | | | | XR = 0 :

| | | | | | | | XH = 0 : 1

| | | | | | | | XH = 1 : 1

| | | | | | | XR = 1 :

| | | | | | | | XB = 0 : 1

| | | | | | | | XB = 1 : 0

| | | | | | XC = 1 : 1

| | | | | XK = 1 :

| | | | | | XD = 0 :

| | | | | | | XF = 0 : 0

| | | | | | | XF = 1 : 1

| | | | | | XD = 1 : 0

| | | | XQ = 1 :

| | | | | XM = 0 :

| | | | | | XN = 0 :

| | | | | | | XU = 0 : 1

| | | | | | | XU = 1 : 0

| | | | | | XN = 1 :

| | | | | | | XP = 0 :

| | | | | | | | XB = 0 : 1

| | | | | | | | XB = 1 : 1

| | | | | | | XP = 1 : 1

| | | | | XM = 1 : 0

| | | XS = 1 :

| | | | XL = 0 :

| | | | | XD = 0 :

| | | | | | XU = 0 : 1

| | | | | | XU = 1 :

| | | | | | | XF = 0 :

| | | | | | | | XG = 0 : 1

| | | | | | | | XG = 1 : 0

| | | | | | | XF = 1 :

| | | | | | | | XE = 0 : 1

| | | | | | | | XE = 1 : 1

| | | | | XD = 1 :

| | | | | | XG = 0 : 0

| | | | | | XG = 1 : 1

| | | | XL = 1 :

| | | | | XE = 0 :

| | | | | | XK = 0 :

| | | | | | | XG = 0 : 1

| | | | | | | XG = 1 :

| | | | | | | | XP = 0 : 0

| | | | | | | | XP = 1 : 1

| | | | | | XK = 1 : 0

| | | | | XE = 1 :

| | | | | | XM = 0 :

| | | | | | | XG = 0 : 0

| | | | | | | XG = 1 : 1

| | | | | | XM = 1 : 0

The accurancy of infoGain is 63.9%

The accurancy of varImp is 76.8%

After Post Prun the accurancy of infoGain is 64.2%

After Post Prun the accurancy of varImp is 77.45%