Decision Tree

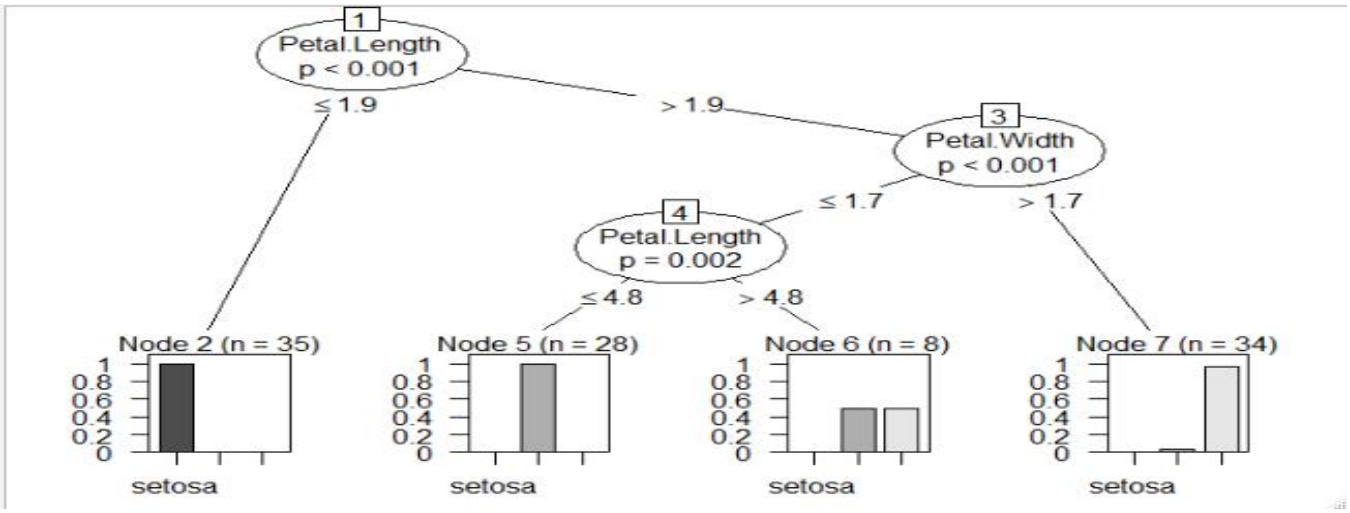
Example-iris Dataset

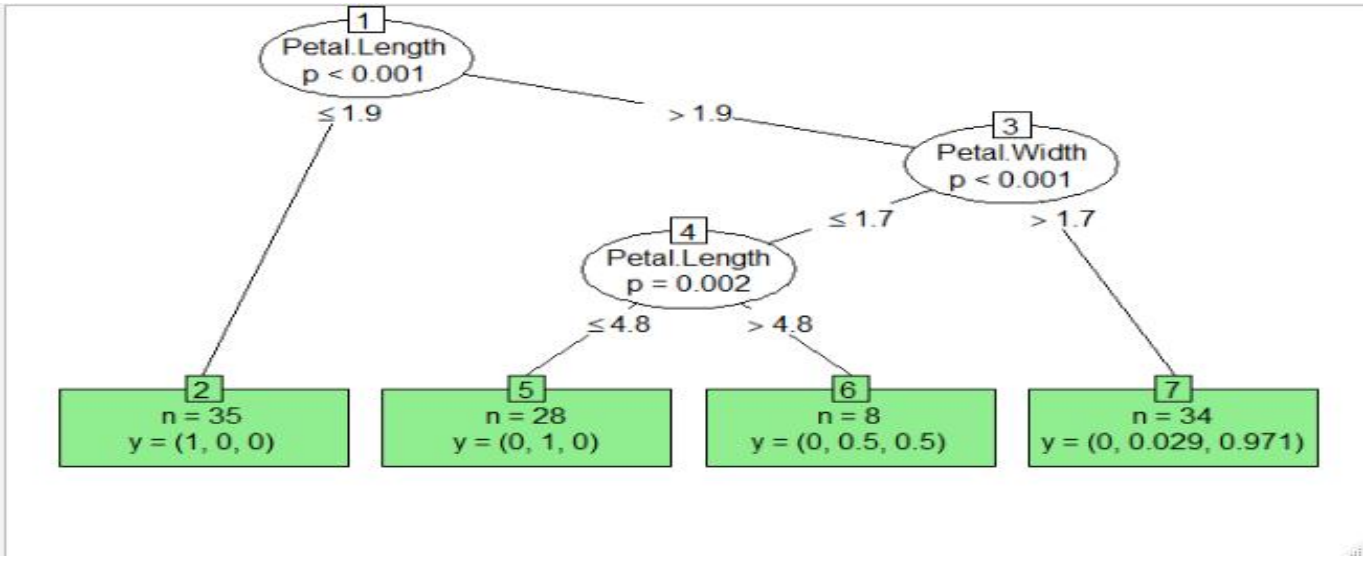
Model-1 ➔ Using function “ctree” from library “party”

Confusion Matrix ➔

	Actual		
Predicted	setosa	versicolor	virginica
setosa	15	0	0
versicolor	0	17	1
virginica	0	0	12

Accuracy of this model ➔ 0.977777



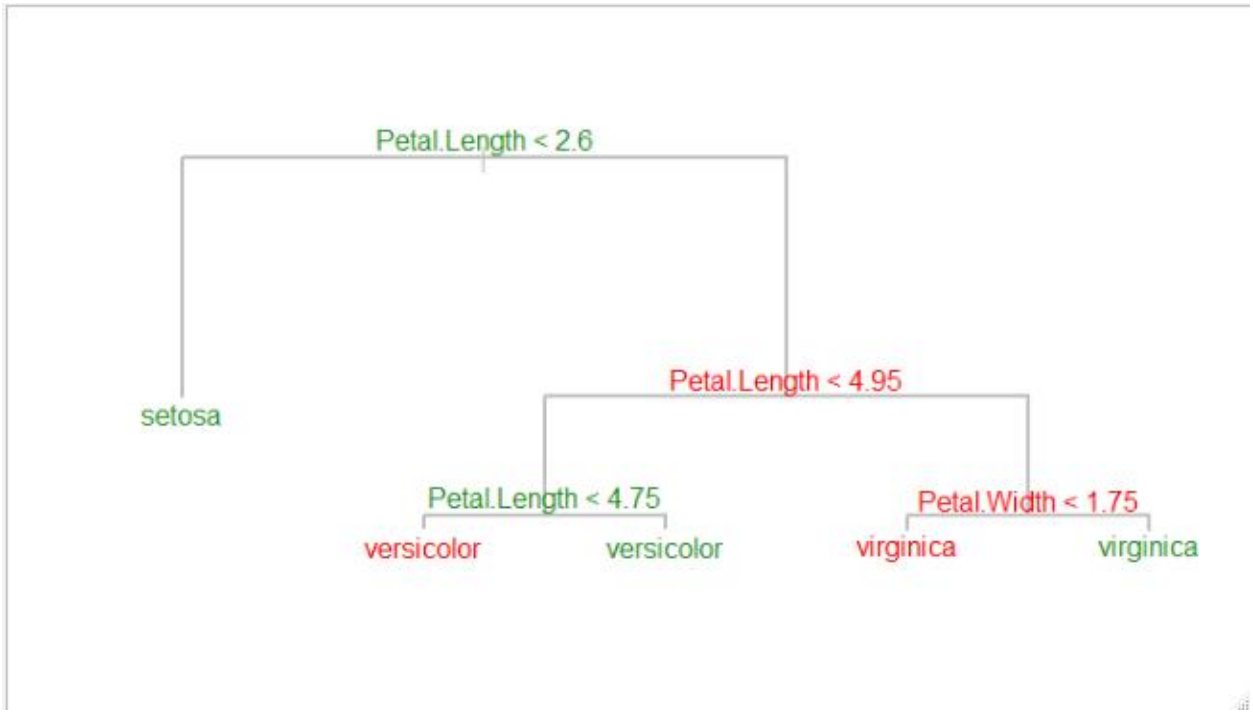


Model-2 ➔ Using function “tree” from package “tree”

Confusion Matrix

	Actual		
Predicted	setosa	versicolor	virginica
setosa	15	0	0
versicolor	0	17	4
virginica	0	0	9

Accuracy of this model ➔ 0.911111



This graph is better than the previous to view for lemma but unable to show probability within graph.

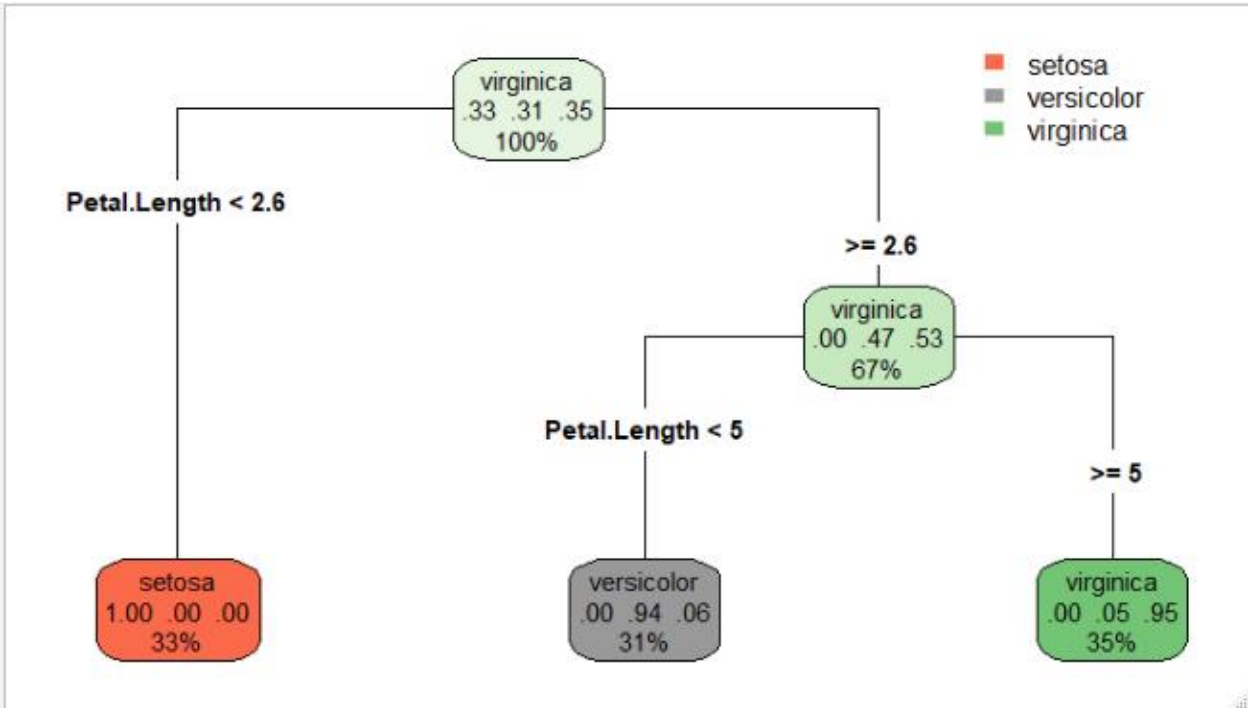
Also efficiency for this model is less than previous model.

Model-3 ➔ Using function “rpart” from package “rpart”

Confusion Matrix

	Actual		
Predicted	setosa	versicolor	virginica
setosa	15	0	0
versicolor	0	17	4
virginica	0	0	9

Accuracy of this model ➔ 0.911111



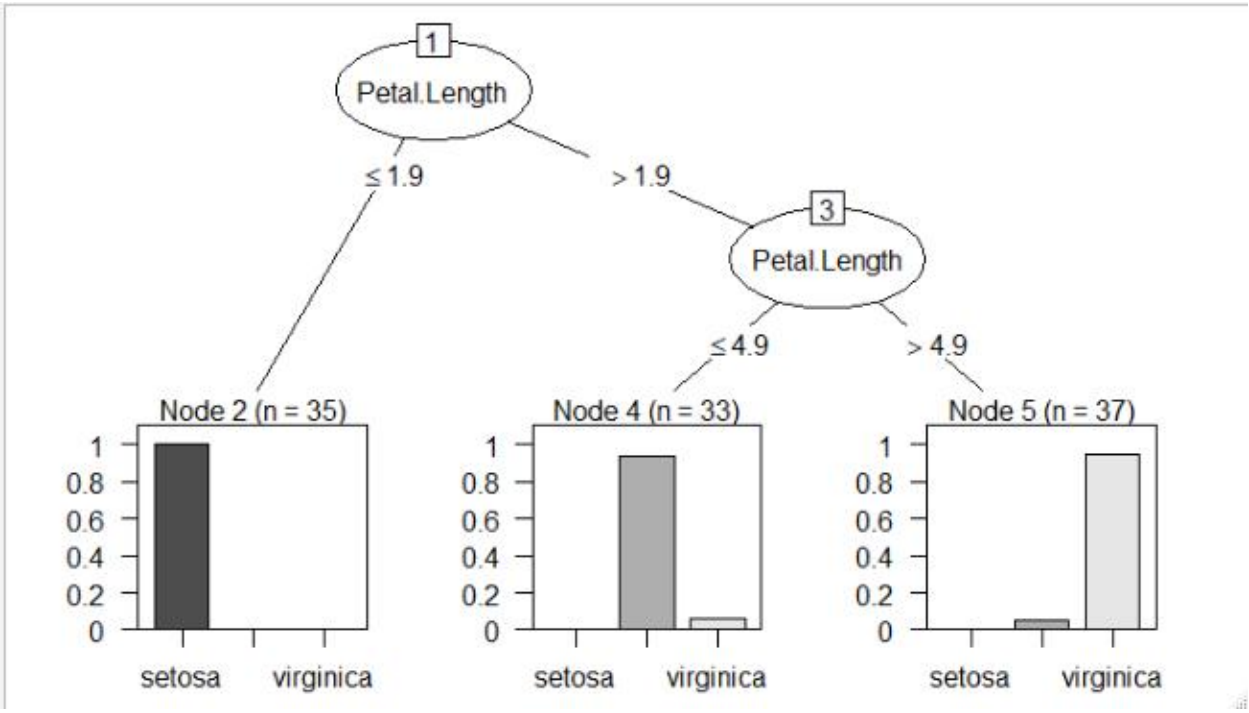
Representation of graph is good but no improvement in accuracy.

Model-4 ➔ Using function “C5.0” from package “C50”

Confusion Matrix

	Actual		
Predicted	setosa	versicolor	virginica
setosa	15	0	0
versicolor	0	17	4
virginica	0	0	9

Accuracy of this model ➔ 0.911111



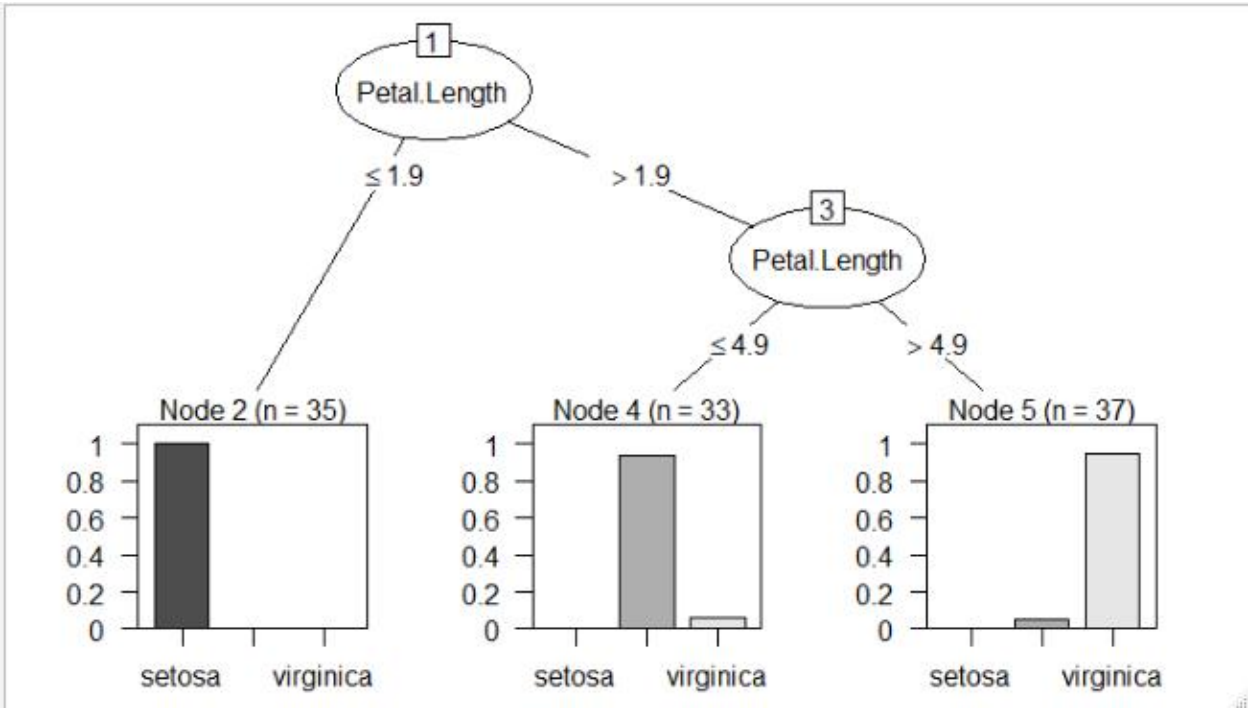
This plot is similar like model with ctree function but difference is with branches, here we can see that one branch and three leaf nodes.

Using Boosting Technique ➔

Confusion Matrix

predi5	setosa	versicolor	virginica
setosa	15	0	0
versicolor	0	17	1
virginica	0	0	12

Accuracy ➔0.97777



From the above information we can infer that boosted model with C5.0 function is our best model.