Classification Tree

Model Summary

Specifications	Growing Method	CRT
	Dependent Variable	price
	Independent Variables	make, fueltype, aspiration, doors, body, drive, engine_loc, wheel_base, length, width, height, weight, engine_type, cylinder, engine_size, fuel, bore, stroke, comp_ratio, horsepower, peak_rpm, city_mpg, hwy_mpg
	Validation	Split Sample
	Maximum Tree Depth	5
	Minimum Cases in Parent Node	100
	Minimum Cases in Child Node	50
Results	Independent Variables Included	No Independent Variable Included
	Number of Nodes	1
	Number of Terminal Nodes	1
	Depth	0

Training Sample

price

Node 0	
Mean	13514.280
Std. Dev.	8086.463
n	157
%	100.0
Predicted	13514.280

Test Sample

price

Node 0	
Mean	12111.159
Std. Dev.	7412.329
n	44
%	100.0
Predicted	13514.280

Gain Summary for Nodes

Sample	Node	N	Percent	Mean
Training	0	157	100.0%	13514.28
Test	0	44	100.0%	12111.16

Growing Method: CRT
Dependent Variable: price

Risk

Sample	Estimate	Std. Error
Training	64974378.6	11729389.3
Test	55662680.1	15335631.7

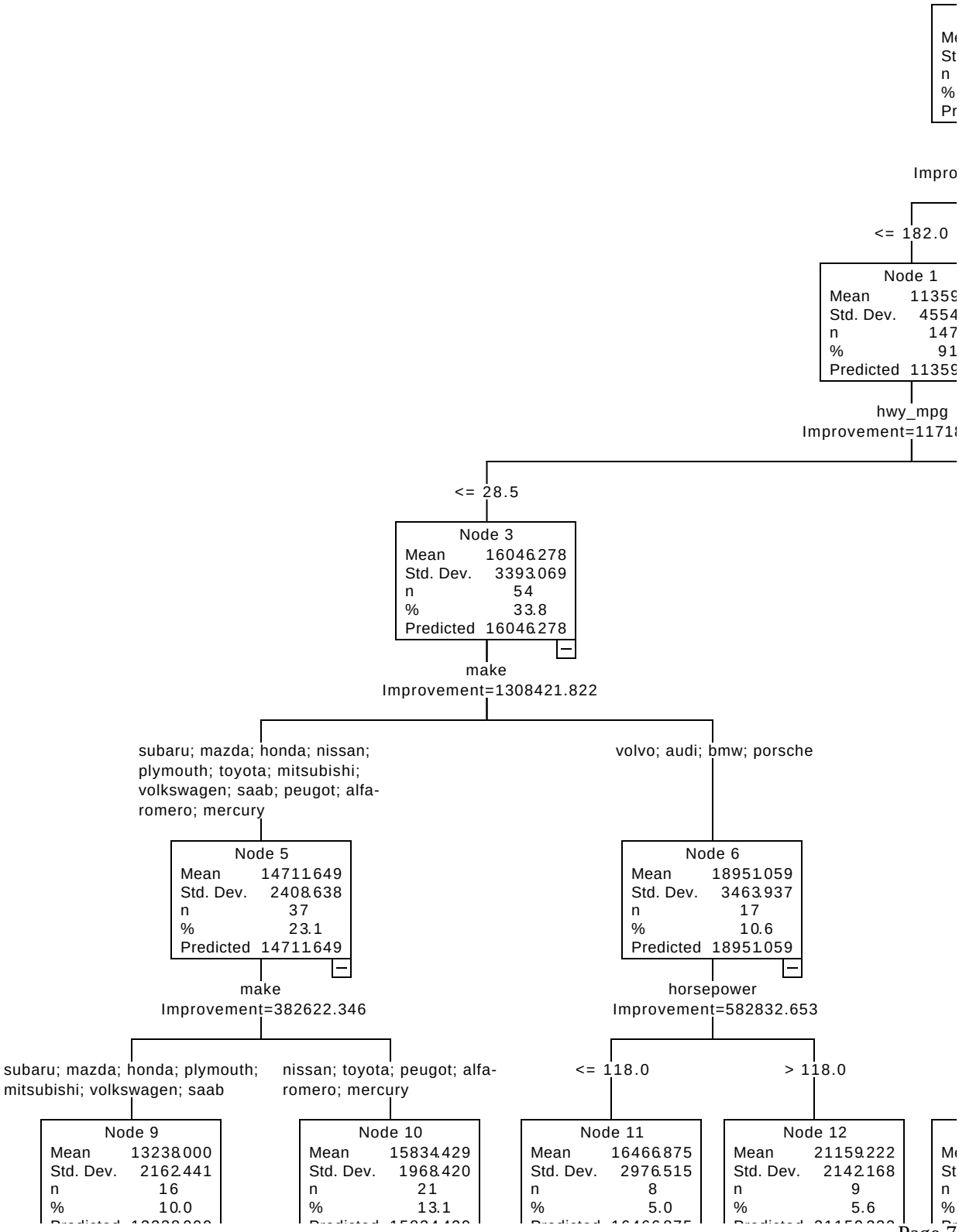
Growing Method: CRT
Dependent Variable: price

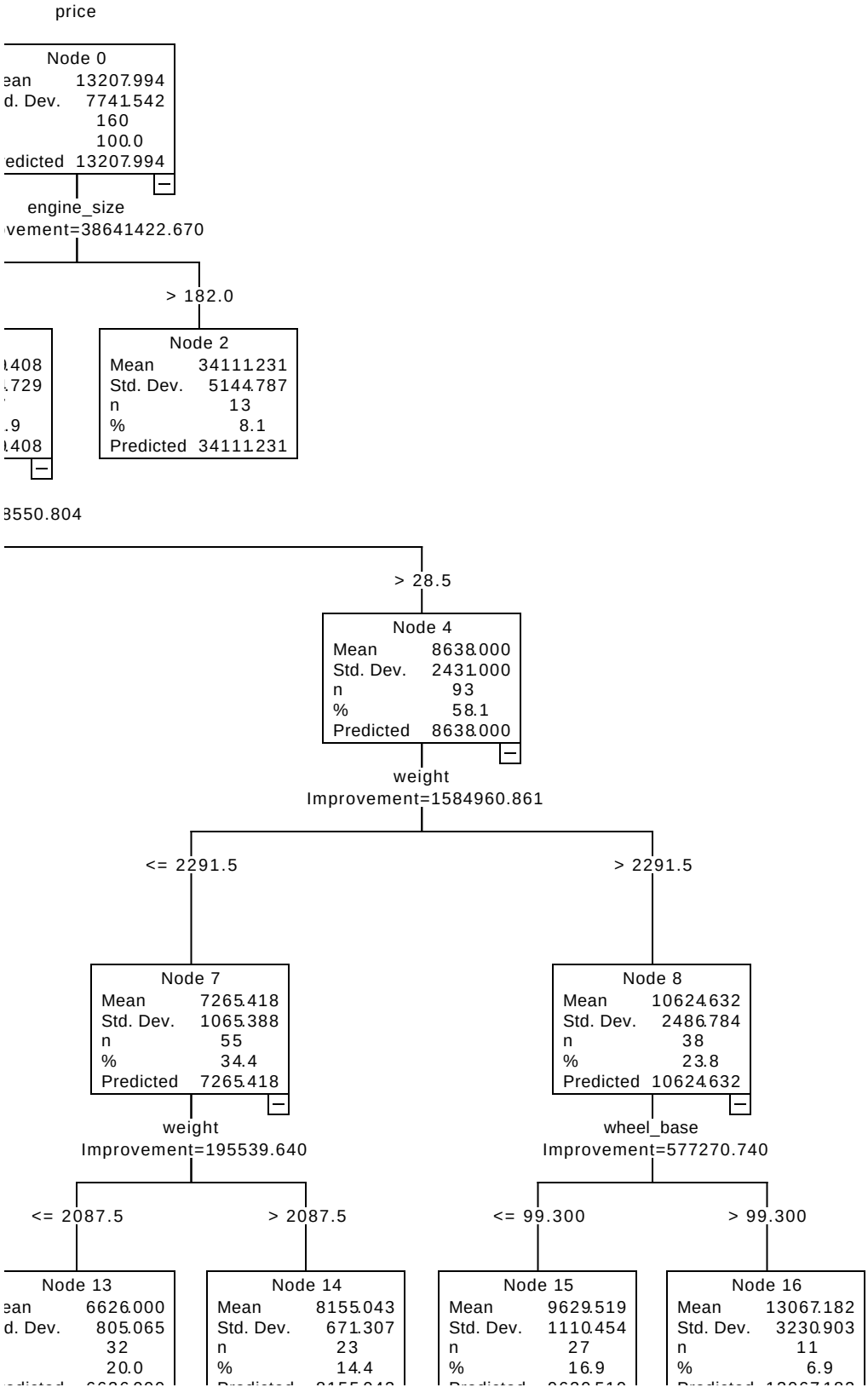
Classification Tree

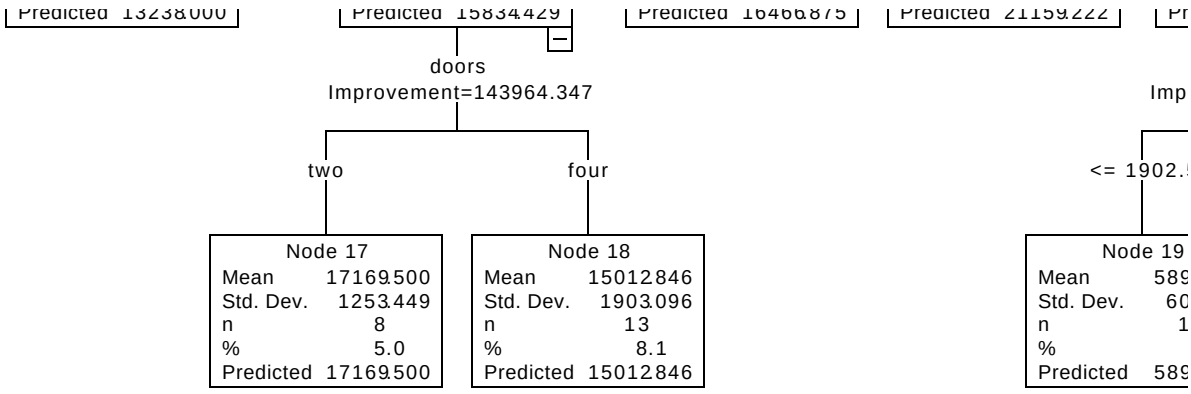
Model Summary

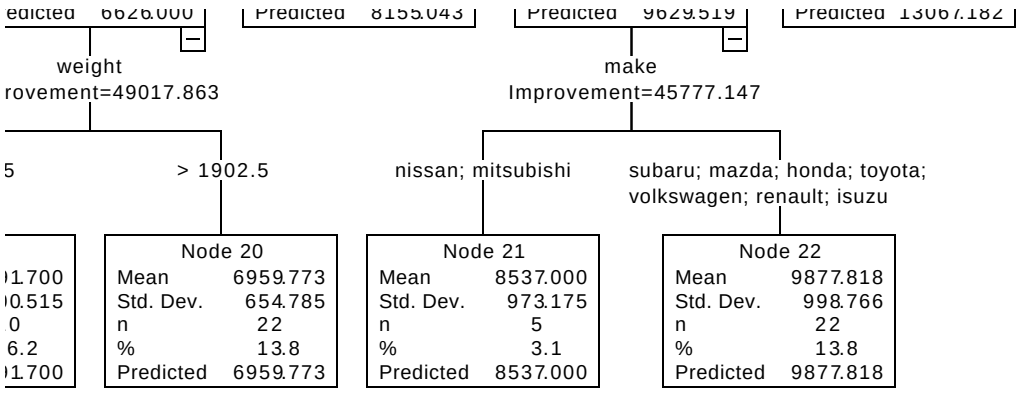
Specifications	Growing Method	CRT
	Dependent Variable	price
	Independent Variables	make, fueltype, aspiration, doors, body, drive, engine_loc, wheel_base, length, width, height, weight, engine_type, cylinder, engine_size, fuel, bore, stroke, comp_ratio, horsepower, peak_rpm, city_mpg, hwy_mpg
	Validation	Split Sample
	Maximum Tree Depth	5
	Minimum Cases in Parent Node	10
	Minimum Cases in Child Node	5
Results	Independent Variables Included	engine_size, make, weight, width, city_mpg, horsepower, hwy_mpg, cylinder, length, wheel_base, engine_loc, height, bore, stroke, drive, fuel, engine_type, comp_ratio, aspiration, body, peak_rpm, doors, fueltype
	Number of Nodes	23
	Number of Terminal Nodes	12
	Depth	5

Training Sample

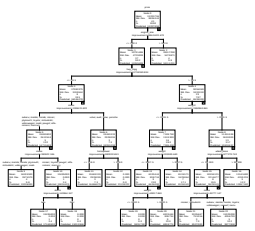

Impro
<= 182.0
Node 1
Mean 11359
Std. Dev. 4554
n 147
% 91
Predicted 11359
hwy_mpg
Improvement=1171
<= 28.5
Node 3
Mean 16046.278
Std. Dev. 3393.069
n 54
% 33.8
Predicted 16046.278
make
Improvement=1308421.822
subaru; mazda; honda; nissan; plymouth; toyota; mitsubishi; volkswagen; saab; peugot; alfa-romero; mercury
volvo; audi; bmw; porsche
Node 5
Mean 14711.649
Std. Dev. 2408.638
n 37
% 23.1
Predicted 14711.649
Node 6
Mean 18951.059
Std. Dev. 3463.937
n 17
% 10.6
Predicted 18951.059
make
Improvement=382622.346
horsepower
Improvement=582832.653
subaru; mazda; honda; plymouth; mitsubishi; volkswagen; saab
nissan; toyota; peugot; alfa-romero; mercury
<= 118.0
> 118.0
Node 9
Mean 13238.000
Std. Dev. 2162.441
n 16
% 10.0
Node 10
Mean 15834.429
Std. Dev. 1968.420
n 21
% 13.1
Node 11
Mean 16466.875
Std. Dev. 2976.515
n 8
% 5.0
Node 12
Mean 21159.222
Std. Dev. 2142.168
n 9
% 5.6


price
Node 0
ean 13207.994
d. Dev. 7741.542
160
100.0
edicted 13207.994
engine_size
vement=38641422.670
> 182.0
Node 2
Mean 34111.231
Std. Dev. 5144.787
n 13
% 8.1
Predicted 34111.231
3550.804
> 28.5
Node 4
Mean 8638.000
Std. Dev. 2431.000
n 93
% 58.1
Predicted 8638.000
weight
Improvement=1584960.861
<= 2291.5
> 2291.5
Node 7
Mean 7265.418
Std. Dev. 1065.388
n 55
% 34.4
Predicted 7265.418
Node 8
Mean 10624.632
Std. Dev. 2486.784
n 38
% 23.8
Predicted 10624.632
weight
Improvement=195539.640
wheel_base
Improvement=577270.740
<= 2087.5
> 2087.5
<= 99.300
> 99.300
Node 13
ean 6626.000
d. Dev. 805.065
32
20.0
Node 14
Mean 8155.043
Std. Dev. 671.307
n 23
% 14.4
Node 15
Mean 9629.519
Std. Dev. 1110.454
n 27
% 16.9
Node 16
Mean 13067.182
Std. Dev. 3230.903
n 11
% 6.9


Predicted 13238.000
Predicted 15834.429
Predicted 16466.875
Predicted 21159.222
doors
Improvement=143964.347
two
four
<= 1902.
Node 17
Mean 17169.500
Std. Dev. 1253.449
n 8
% 5.0
Predicted 17169.500
Node 18
Mean 15012.846
Std. Dev. 1903.096
n 13
% 8.1
Predicted 15012.846
Node 19
Mean 589
Std. Dev. 60
n 1
%
Predicted 589


edicted 6626.000
Predicted 8155.043
Predicted 9629.519
Predicted 13067.182
weight
rovement=49017.863
make
Improvement=45777.147
5
> 1902.5
nissan; mitsubishi
subaru; mazda; honda; toyota;
volkswagen; renault; isuzu
1.700
0.515
0
6.2
1.700
Node 20
Mean 6959.773
Std. Dev. 654.785
n 22
% 13.8
Predicted 6959.773
Node 21
Mean 8537.000
Std. Dev. 973.175
n 5
% 3.1
Predicted 8537.000
Node 22
Mean 9877.818
Std. Dev. 998.766
n 22
% 13.8
Predicted 9877.818

Test Sample



Gain Summary for Nodes

Sample	Node	N	Percent	Mean
Training	2	13	8.1%	34111.23
	12	9	5.6%	21159.22
	17	8	5.0%	17169.50
	11	8	5.0%	16466.88
	18	13	8.1%	15012.85
	9	16	10.0%	13238.00
	16	11	6.9%	13067.18
	22	22	13.8%	9877.82
	21	5	3.1%	8537.00
	14	23	14.4%	8155.04
	20	22	13.8%	6959.77
	19	10	6.3%	5891.70
Test	2	4	9.8%	35517.25
	12	0	0.0%	.00
	17	1	2.4%	13495.00
	11	3	7.3%	19463.33
	18	0	0.0%	.00
	9	4	9.8%	16193.50
	16	5	12.2%	13143.40
	22	5	12.2%	11029.20
	21	3	7.3%	9335.67
	14	7	17.1%	8124.57
	20	9	22.0%	6320.44
	19	0	0.0%	.00

Growing Method: CRT
Dependent Variable: price

Risk

Sample	Estimate	Std. Error
Training	4326521.83	1033275.05
Test	9197582.43	2274961.27

Growing Method: CRT
Dependent Variable: price