2021 Craigslist used electric cars price Prediction

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Contents

Introduction

With the soaring oil price, more and more people are considering buying an electric car to save money. We would like to build models to help predict the used electric car price so that customers can use this model to determine whether the deal is reasonable.

We used data from Craigslist, which is the world's largest collection of used vehicles for sale. The original data contains price of used car from Apr 2011 to May 2011, it contains 426880 observations and 18 variables. Since we are only interested in cars fueled by electricity, data is reduced to 1698 observations.

Research Questions

- Find appropriate way to handle missing values.
- Conduct exploratory data analysis to find interesting facts about the data.
- Build and compare machine learning models to find the best one for the prediction task.

Data preparation

We drop variables that has missing rate higher than 35%. For variables with relatively high missing rate (>2%), we analyze the missing pattern, whether they are MAR or MNAR. For MNAR categorical variables, missingness is treat as an attribute *NAN_cat*. For MAR categorical variables, missing values are imputed with mode. After selection and imputation, the final variables for model are as follow

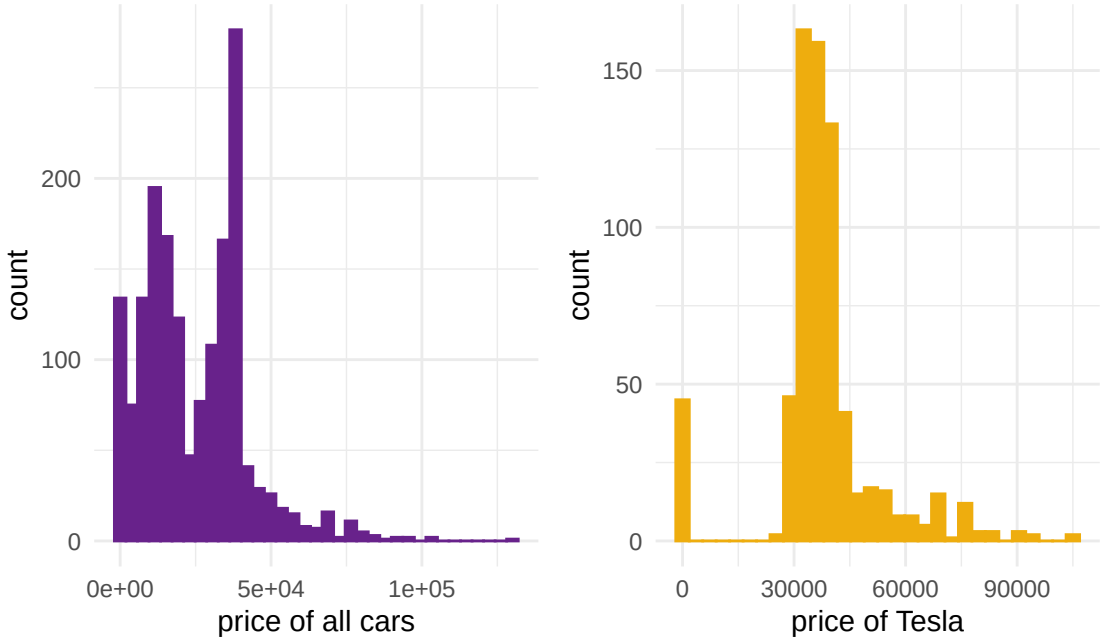
Variable	Type	levels/range	Missing rate	Missing type	Impute method
Price	continuous	0-130000	0	NA	NA
Year	continuous	1901-2022	0.2%	MAR	Median
Odometer	continuous	0-1111111	0.3%	MAR	Median
Lat	continuous	19.64-61.57	1.8%	MAR	Median
Long	continuous	-159.37–70.06	1.8%	MAR	Median
Manufacturer	category	29 levels	4.8%	MNAR	NA as attribute
Condition	category	6 levels	31.6%	MNAR	NA as attribute
Title_status	category	6 levels	1.5%	MNAR	NA as attribute
Transmission	category	3 levels	1.1%	MAR	Mode
Drive	category	3 levels	19.9%	MAR	Mode
Type	category	11 levels	10.1%	MAR	Mode
State	category	49 levels	0	NA	NA
Paint_color	category	11 levels	26.4%	MAR	Mode

Manufacturer, *Title_status* and *Condition* are considered MNAR because the records with missing values clearly has lower price compared to other category.

Exploratory data analysis

We discovered some interesting facts through visualization. Note that all the exploratory data analysis are based on the raw data without imputation.

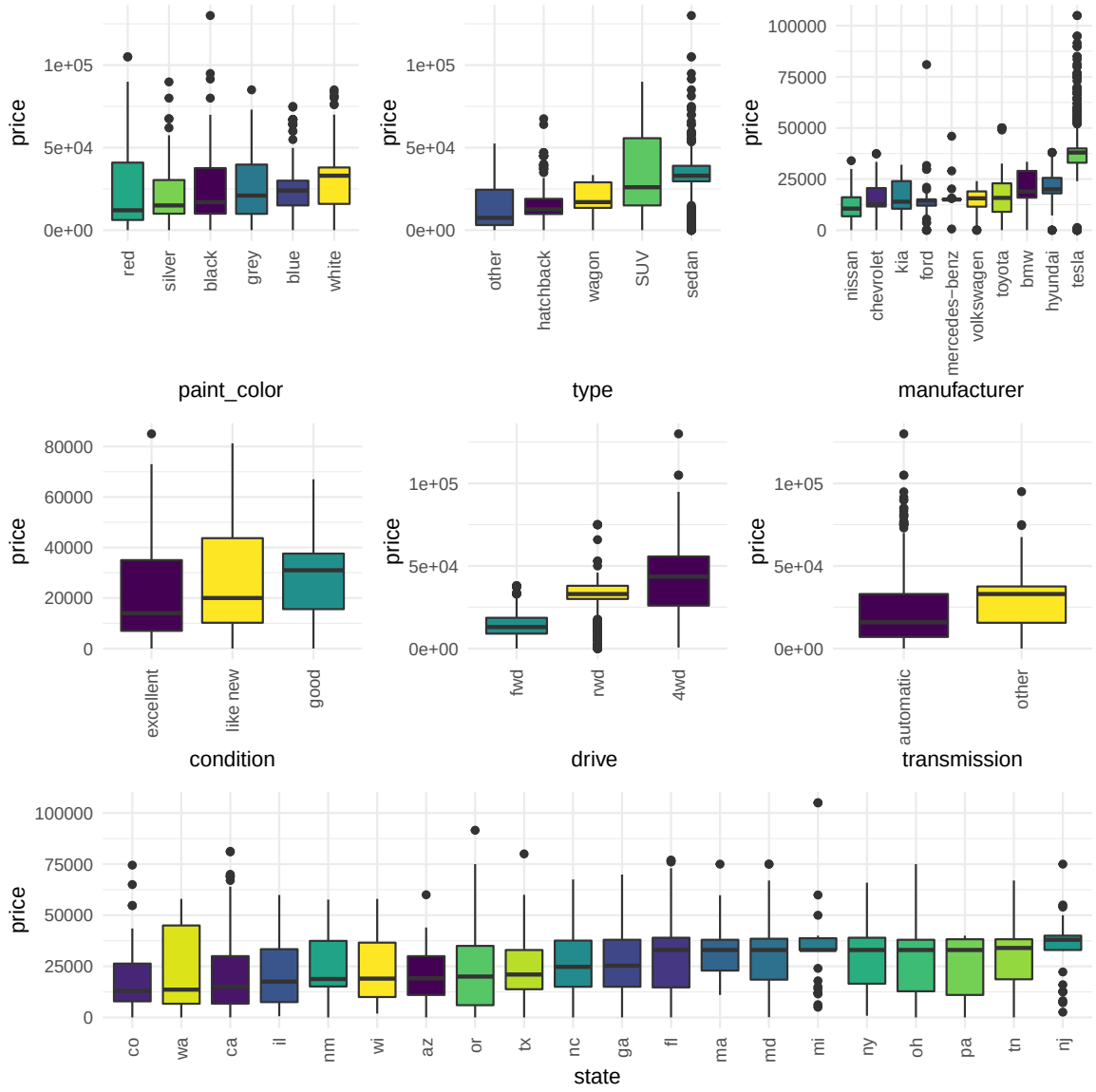
Interesting price distribution



From the first price histogram, there is clearly two vertices of the price, and the price is relatively skewed to the left. The reason is that 689 out of 1698 observations in the dataset is manufacturered by Tesla, and Tesla has a higher price than most of other brands.

In addition, there are some errorness in the dataset, it contains some prices equal or very close to 0. We remove the 7% lowest price records in the dataset (7% quantile on price is quantile(df$price, 0.07)).

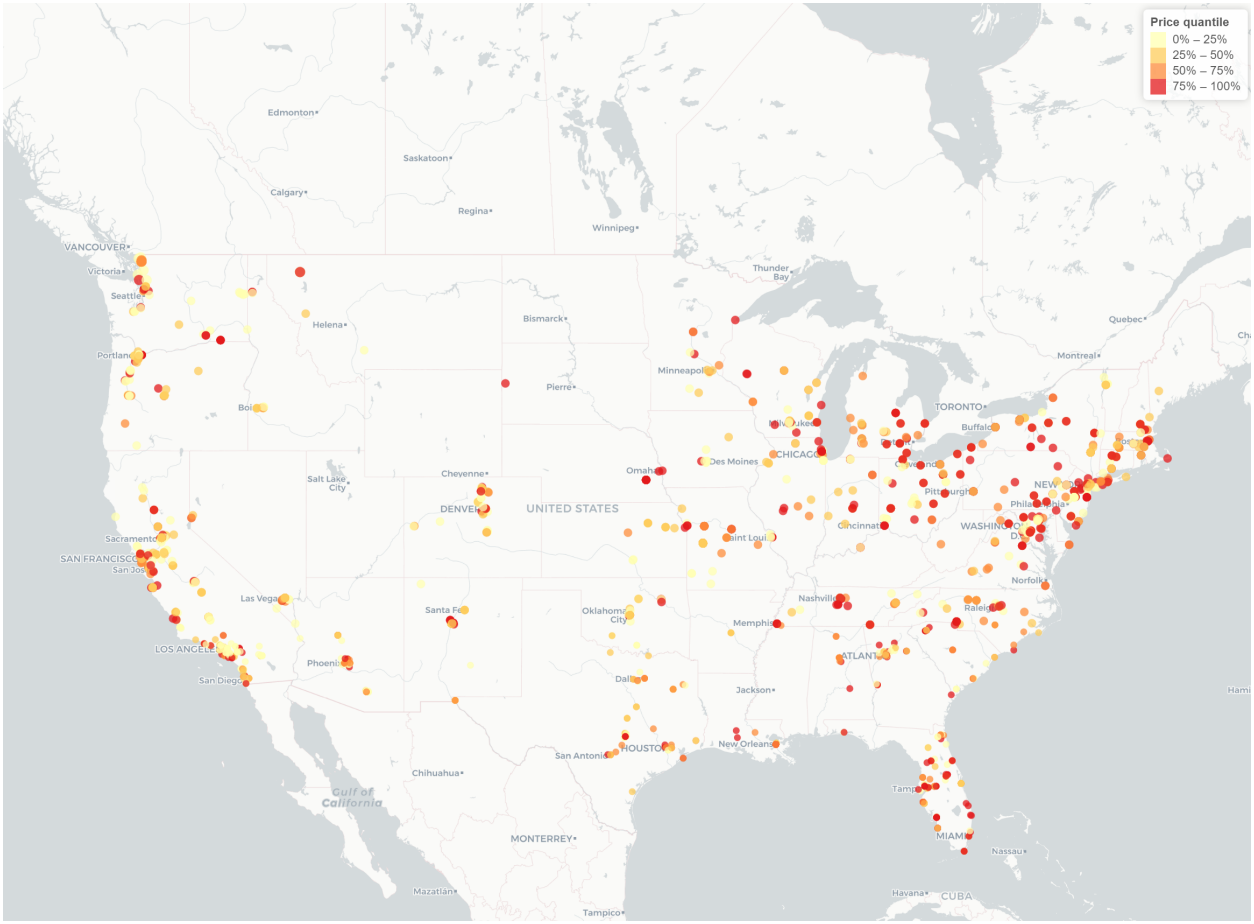
Price vs category variables



Despite some common knowledge, here is some interesting factors from these boxplot:

- White cars has the highest price while red ones has the lowest median price. However, prices of red cars are scattered.
- 4wd cars has the highest price and the reason behind this ican be car type. 123 out of 166 4wd cars are SUV and Sedan.
- Electric cars New Jersy has the highest median price while California is one of the states with the lowest median price.

Price map



Most car sales takes place near the Coast or the Great Lakes Region. In addition, the car price in the East Coast is clearly higher than that in the West Coast

Models

I used Lasso, Regression Tree and Gradient Boosting Tree to predict the price. I used Lasso because there is a considerable number of variables (239 including dummy variables) in the training data. And L1 regularization can help reduce dimension and avoid multicollinearity. In addition, I selected Regression Tree because it is easy to interpret and it captures the interaction between variables. Finally, I adopted the ensemble model GBM to better utilize the good property of tree-based models, a single tree can have high bias while boosting methods fits the residual of last round to gradually reduce bias.

Model preparation

Conduct model preparation with exact following steps

- Impute the data and divide the data into train set and test set. Test set takes up 20%.
- Using MinMaxScaler to scale all continuous variable in range [0, 1] so that the Lasso coefficients are comparable.
- Remove the 2% records with low price in the training set.

Building model and tuning parameters

Use cross validation to select the best parameter or parameter combination for each model.

Lasso

The parameter λ controls the L1 Regularization, the bigger the λ, the fewer variables in the model. Set the candidate values of λ to be from 0.1353353 to 0.0067379 with 300 steps, the best-tune λ is 148.4131591.

Regression Tree

```
## [1] 7
```

The parameter *max tree depth* determines how many splits/leaves the tree can get. A lower *max tree depth* may result in underfitting while a higher *max tree depth* can lead to overfitting. Set the candidate values of parameter to be 1 to 10 with step of 1, the best-tune *max tree depth* is 7

Gradient Boosting Regression Tree

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## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
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## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
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## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 211734966.3724             nan     0.0500 15185258.3054
##      2 198900895.3415             nan     0.0500 13394002.0212
##      3 187080599.3291             nan     0.0500 11488319.3248
##      4 175824460.8169             nan     0.0500 11272711.9438
##      5 165249051.9669             nan     0.0500 10246562.5743
##      6 156262676.3509             nan     0.0500 9258057.4864
```

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##      7 147598780.6881             nan     0.0500 8237383.7506
##      8 140054398.0180             nan     0.0500 7575290.7927
##      9 133057382.5981             nan     0.0500 5330846.4662
##     10 126829106.7498             nan     0.0500 6152887.3182
##     20 85411437.6812              nan     0.0500 2753740.6734
##     40 53770256.9484              nan     0.0500 769282.2814
##     60 41805976.3415              nan     0.0500 294405.9988
##     80 36338158.0327              nan     0.0500 122932.0844
##    100 32991441.2941              nan     0.0500 152989.0379
##    120 31054562.5694              nan     0.0500 -43779.6695
##    140 29736005.8207              nan     0.0500 -44704.0676
##    160 28667177.2763              nan     0.0500 9483.4182
##    180 27768467.4050              nan     0.0500 -6087.7321
##    200 27046565.0341              nan     0.0500 -36862.8093
##    220 26146203.0886              nan     0.0500 -4519.6938
##    240 25499545.0859              nan     0.0500 17200.2443
##    260 24902120.8477              nan     0.0500 -1519.2397
##    280 24369073.9139              nan     0.0500 -23912.2207
##    300 23956931.0741              nan     0.0500 -15604.1437
##    320 23518259.6414              nan     0.0500 -25200.9118
##    340 23156845.5783              nan     0.0500 -1662.3972
##    360 22679107.7049              nan     0.0500 22388.3698
##    380 22199609.5832              nan     0.0500 9301.4536
##    400 21772531.1034              nan     0.0500 -19617.2789
##    420 21400948.3888              nan     0.0500 -15403.1048
##    440 21165162.7083              nan     0.0500 -17364.8925
##    460 20926703.6763              nan     0.0500 -15949.5995
##    480 20619205.2143              nan     0.0500 -21954.4847
##    500 20355456.9197              nan     0.0500 -21987.8589

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## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 210359885.0890             nan     0.0500 16543520.2073
##      2 195548329.0748             nan     0.0500 14751426.7336
##      3 182351668.5764             nan     0.0500 13865641.1959
##      4 170180877.5475             nan     0.0500 12072173.0849
##      5 158739111.2104             nan     0.0500 10584755.0784
##      6 148270642.0981             nan     0.0500 10477413.0819
##      7 139065947.4125             nan     0.0500 8685156.4837
##      8 130985374.4800             nan     0.0500 8435543.9098
##      9 123389738.4480             nan     0.0500 7783493.7258
##     10 116283242.0732             nan     0.0500 6912376.8664
##     20 72444016.7841              nan     0.0500 2795982.2185
##     40 43700609.5372              nan     0.0500 716166.7298
##     60 33990853.9940              nan     0.0500 193166.8969
##     80 29961523.7974              nan     0.0500 62415.4353
##    100 27438896.6316              nan     0.0500  647.9855
##    120 25640587.8814              nan     0.0500 13578.9843
##    140 24543643.1308              nan     0.0500 3523.5113
##    160 23501303.0649              nan     0.0500 -38171.1609
##    180 22690851.4877              nan     0.0500 -15949.7450
##    200 21954324.8736              nan     0.0500 -61281.0107
##    220 21325448.4047              nan     0.0500 -126.3107
##    240 20633988.9460              nan     0.0500 -32393.0055
##    260 19998235.9077              nan     0.0500 -41756.7196
##    280 19443978.5112              nan     0.0500 -9156.3147
##    300 18750114.9422              nan     0.0500 17278.6020
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##    340 17847657.0839              nan     0.0500 -36034.5094
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##    480 15337797.4291              nan     0.0500 -39922.4566
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##      1 210748582.2164             nan     0.0500 16542280.3629
##      2 194964989.1284             nan     0.0500 15890960.7253
##      3 180783408.5231             nan     0.0500 13792728.4908
##      4 167918778.1634             nan     0.0500 12724991.6603
##      5 156280006.0130             nan     0.0500 11521985.6522
##      6 145808472.5982             nan     0.0500 10027246.9682
##      7 136295752.7289             nan     0.0500 9744540.4416
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##      9 119518951.9653             nan     0.0500 8269284.0330
##     10 112540488.0691             nan     0.0500 6476920.0735
##     20 67004647.5956              nan     0.0500 2488373.9728
##     40 38471943.2026              nan     0.0500 517720.7511
##     60 29885586.2792              nan     0.0500 190652.4952
##     80 25903252.5466              nan     0.0500 38544.8378
##    100 23817530.3701              nan     0.0500 54962.2628
##    120 22364715.2840              nan     0.0500 -22292.1340
##    140 21034100.1173              nan     0.0500 -105116.1223
##    160 20196454.7396              nan     0.0500 -14772.9394
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##    260 16536117.8099              nan     0.0500 -20629.1532
##    280 16094292.4879              nan     0.0500 -32935.8258
##    300 15573415.6836              nan     0.0500   -4.5024
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##      1 209145613.0366             nan     0.0500 17253875.6258
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##      6 142587622.4408             nan     0.0500 10926093.4963
##      7 132773342.9012             nan     0.0500 10118604.9008
##      8 123825173.0523             nan     0.0500 8638965.3947
##      9 115901150.1429             nan     0.0500 7728972.1928
##     10 108644061.8381             nan     0.0500 7280632.0701
##     20 62522109.1373             nan     0.0500 2780731.9411
##     40 34920381.7245             nan     0.0500 527392.6617
##     60 26957018.6564             nan     0.0500 116078.5017
##     80 23281787.1285             nan     0.0500 -27438.5487
##    100 21425985.1414             nan     0.0500 -30602.3410
##    120 19797252.8013             nan     0.0500 -6296.2040
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##      1 208742079.3995             nan     0.0500 18650163.7841
##      2 192794494.3695             nan     0.0500 17010749.8494
##      3 178057665.9038             nan     0.0500 15288100.5462
##      4 164865427.8775             nan     0.0500 12675406.0110
##      5 152553386.1301             nan     0.0500 11957270.8483
##      6 141632831.4111             nan     0.0500 10991483.0968
##      7 131572668.8120             nan     0.0500 9250252.7016
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##     10 106916542.1191             nan     0.0500 7003802.5066
##     20 60133885.0044              nan     0.0500 2834287.7793
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##     80 20950982.5279              nan     0.0500 13208.5098
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##    160 15274945.1756              nan     0.0500 -69855.8245
##    180 14465730.5186              nan     0.0500 -35125.1431
##    200 13771632.1958              nan     0.0500 -30471.1552
##    220 13116003.5618              nan     0.0500 -52363.7712
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##    280 11477910.8319              nan     0.0500 -40393.4953
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##    360  9844433.8936              nan     0.0500 -16832.8150
##    380  9467973.6835              nan     0.0500 -8398.3213
##    400  9104765.3307              nan     0.0500 -13560.7430
##    420  8783824.0401              nan     0.0500 -22006.0017
##    440  8507036.8961              nan     0.0500 -20135.8109
##    460  8274224.4501              nan     0.0500 -8199.4936
##    480  7987859.7043              nan     0.0500 -34861.0312
##    500  7655153.5112              nan     0.0500 -13315.3182
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## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 208944671.3740             nan     0.0500 18045736.6329
##      2 192581896.2939             nan     0.0500 16124526.0494
##      3 177709156.6540             nan     0.0500 14495807.5542
##      4 163941645.7005             nan     0.0500 12821387.5662
##      5 151425775.7157             nan     0.0500 12813619.8270
##      6 140544368.0513             nan     0.0500 10683006.2415
##      7 130399983.9928             nan     0.0500 10333511.7395
##      8 121119609.5303             nan     0.0500 8935918.7746
##      9 112603113.2466             nan     0.0500 7991427.4939
##     10 104834329.0031             nan     0.0500 7328337.0924
##     20 58350044.2788             nan     0.0500 2627802.0243
##     40 30215708.8708             nan     0.0500 422419.6036
##     60 22702033.8781             nan     0.0500 122671.1787
##     80 19432263.8026             nan     0.0500 8285.3971
##    100 17302207.7101             nan     0.0500 44267.1129
##    120 15891675.7766             nan     0.0500 -10853.9810
##    140 14698733.9194             nan     0.0500 -31307.6968
##    160 13797749.2887             nan     0.0500 -34015.6024
##    180 12960325.4537             nan     0.0500 -17343.4819
##    200 12274081.2032             nan     0.0500 -29238.3026
##    220 11542102.9894             nan     0.0500 -1590.1579
##    240 10998435.0870             nan     0.0500 -22349.1363
##    260 10464810.1344             nan     0.0500 -51163.1736
##    280 10013991.1029             nan     0.0500 -57478.3502
##    300  9600364.3928             nan     0.0500 -32607.6810
##    320  9198019.5688             nan     0.0500 -28424.0567
##    340  8758321.9170             nan     0.0500 -28428.1103
```

```
##    360  8395013.1961             nan     0.0500 -43450.3669
##    380  8008565.2061             nan     0.0500 -22072.8497
##    400  7697804.8326             nan     0.0500 -2528.4957
##    420  7383309.5969             nan     0.0500 -10352.8593
##    440  7089546.6565             nan     0.0500 -12005.5666
##    460  6817998.8626             nan     0.0500 -12287.0554
##    480  6565007.9730             nan     0.0500 -21144.4374
##    500  6323029.8510             nan     0.0500 -17958.4996

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 7: manufacturerdodge has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 197708927.4759             nan     0.1000 29529456.3173
##      2 174237416.1923             nan     0.1000 23774772.0176
##      3 154698978.3777             nan     0.1000 19082912.3124
##      4 138549894.6113             nan     0.1000 16470226.3462
##      5 124704095.6326             nan     0.1000 14118246.1649
##      6 113430393.2029             nan     0.1000 10896159.6185
##      7 104105940.2825             nan     0.1000 8536674.1150
##      8 96167555.6270             nan     0.1000 7565013.1146
##      9 89747872.9741             nan     0.1000 6511871.9796
##     10 84029257.2787             nan     0.1000 5653231.1704
##     20 53564838.6394             nan     0.1000 1757012.4311
##     40 36616527.2700             nan     0.1000 3602.5413
##     60 31027868.5710             nan     0.1000 48483.9691
##     80 28432942.1174             nan     0.1000 89454.8848
##    100 26872075.9293             nan     0.1000 -47906.1232
##    120 25418063.0208             nan     0.1000 83752.0953
##    140 24410909.0331             nan     0.1000 -55030.4946
##    160 23423236.7361             nan     0.1000 -63526.4046
```

```
##    180 22636844.8483             nan     0.1000 -122448.2135
##    200 21862135.4079             nan     0.1000 -43133.6898
##    220 21143398.1465             nan     0.1000 -105366.7483
##    240 20648746.9372             nan     0.1000 -39916.4747
##    260 20143930.4635             nan     0.1000 -66894.8160
##    280 19648995.5822             nan     0.1000 -87224.8606
##    300 19307711.2189             nan     0.1000 -47493.6388
##    320 18829404.0033             nan     0.1000 -97046.2418
##    340 18282843.8614             nan     0.1000 -66425.1849
##    360 17956422.2827             nan     0.1000 -38403.2428
##    380 17709947.7077             nan     0.1000 -44851.9808
##    400 17270320.0572             nan     0.1000 -59897.7364
##    420 16992534.4964             nan     0.1000 -45011.4143
##    440 16651705.3728             nan     0.1000 -28418.2528
##    460 16462252.3937             nan     0.1000 -41487.3891
##    480 16199432.4117             nan     0.1000 -65637.8994
##    500 15890486.9139             nan     0.1000 9139.2891

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 7: manufacturerdodge has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 194849835.0180             nan     0.1000 33066936.4255
##      2 168267668.0613             nan     0.1000 26554366.1529
##      3 146404390.6612             nan     0.1000 22087309.7371
##      4 128907464.3338             nan     0.1000 17146677.5939
##      5 114105438.2533             nan     0.1000 15348902.7419
##      6 101481282.0180             nan     0.1000 11625375.6879
##      7 91168641.9244             nan     0.1000 9680843.7914
##      8 83300113.7909             nan     0.1000 8117096.5130
##      9 76874204.6778             nan     0.1000 6727229.6108
```

```
##     10 70852498.0375             nan     0.1000 6197953.1006
##     20 42756053.8857             nan     0.1000 1243651.7480
##     40 30314990.3277             nan     0.1000 123836.4508
##     60 25616833.2961             nan     0.1000 -112855.9782
##     80 23605337.7815             nan     0.1000 11327.0373
##    100 22294923.9078             nan     0.1000 8870.9835
##    120 20841210.4596             nan     0.1000 -43279.3434
##    140 19800273.4303             nan     0.1000 -63122.2913
##    160 18589491.1605             nan     0.1000 -64862.9454
##    180 17752807.2761             nan     0.1000 -60794.4199
##    200 17169789.7395             nan     0.1000 -22655.0438
##    220 16233412.6333             nan     0.1000 -53727.9965
##    240 15630129.7671             nan     0.1000 -58563.3443
##    260 14915162.8256             nan     0.1000 -63634.4219
##    280 14442648.4801             nan     0.1000 -90171.2298
##    300 14001141.2939             nan     0.1000 -148274.2460
##    320 13616980.5550             nan     0.1000 -14505.7834
##    340 13299770.3648             nan     0.1000 -97157.4746
##    360 12988900.9606             nan     0.1000 -27782.2942
##    380 12633868.5738             nan     0.1000 -79988.7186
##    400 12337011.9274             nan     0.1000 -75026.6404
##    420 11986996.3546             nan     0.1000 -51369.4547
##    440 11624955.9037             nan     0.1000 -7332.7277
##    460 11306265.4901             nan     0.1000 -42947.8963
##    480 11128477.1208             nan     0.1000 -99914.5427
##    500 10854897.1089             nan     0.1000 -22263.7994

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 7: manufacturerdodge has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 193619813.2496             nan     0.1000 33255913.0320
##      2 165920143.8083             nan     0.1000 27611530.2276
##      3 143797407.5546             nan     0.1000 21033090.8869
##      4 124873257.5298             nan     0.1000 17289367.4326
##      5 109814456.5637             nan     0.1000 14873922.7977
##      6 97096730.9270             nan     0.1000 12932606.1503
##      7 87903114.4680             nan     0.1000 9624370.1930
##      8 79678756.3443             nan     0.1000 8862986.2797
##      9 71961827.2772             nan     0.1000 7339862.6167
##     10 65868243.0318             nan     0.1000 5754679.6415
##     20 38834475.4973             nan     0.1000 1458844.1273
##     40 25923940.0525             nan     0.1000 192276.9359
##     60 22156482.9809             nan     0.1000 -225136.9744
##     80 19905034.4021             nan     0.1000 25081.5161
##    100 18518144.6973             nan     0.1000 -50918.2432
##    120 17217937.7344             nan     0.1000 -167110.3584
##    140 16019566.8920             nan     0.1000 -89717.3783
##    160 15004764.3294             nan     0.1000 -57238.1970
##    180 14074931.6466             nan     0.1000 -66024.7084
##    200 13414895.9026             nan     0.1000 -45100.5590
##    220 12777902.7504             nan     0.1000 -106981.2235
##    240 12215693.8708             nan     0.1000 -16261.4689
##    260 11738274.7865             nan     0.1000 -94776.8151
##    280 11127606.8656             nan     0.1000 -10004.3547
##    300 10686175.1112             nan     0.1000 -44971.2698
##    320 10306056.6566             nan     0.1000 -34826.7565
##    340  9915338.3342             nan     0.1000 -32796.9662
##    360  9575890.2202             nan     0.1000 -73552.4919
##    380  9216483.8433             nan     0.1000 -31828.4902
##    400  8899048.3507             nan     0.1000 -86501.0593
##    420  8590471.4513             nan     0.1000 -18332.4644
##    440  8318336.1049             nan     0.1000 -46756.6020
##    460  7996740.5922             nan     0.1000 -38544.0760
##    480  7751649.9665             nan     0.1000 -47370.1467
##    500  7435652.1022             nan     0.1000 -67513.9946

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 7: manufacturerdodge has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 192159163.0654             nan     0.1000 33823599.1395
##      2 164026852.7781             nan     0.1000 27088609.1492
##      3 140732056.5814             nan     0.1000 22809004.2306
##      4 122071977.2704             nan     0.1000 19558963.2290
##      5 106363721.0236             nan     0.1000 14934233.1765
##      6 93527705.3274             nan     0.1000 11919119.3594
##      7 83004776.9807             nan     0.1000 10811844.9722
##      8 74077370.5791             nan     0.1000 7610998.0398
##      9 67452277.9912             nan     0.1000 6332682.4423
##     10 61269259.1367             nan     0.1000 5499760.9753
##     20 34605356.4028             nan     0.1000 917507.7032
##     40 23578155.7850             nan     0.1000 57497.4421
##     60 20033077.0636             nan     0.1000 56238.3105
##     80 17777972.8589             nan     0.1000 -16503.3998
##    100 16061276.1819             nan     0.1000 -51464.1736
##    120 14855257.3120             nan     0.1000 -47368.4487
##    140 13836811.8017             nan     0.1000 -70750.0387
##    160 12795474.2804             nan     0.1000 -41992.4677
##    180 11943596.7544             nan     0.1000 -64817.3364
##    200 11263490.8982             nan     0.1000 -142714.2427
##    220 10690932.6207             nan     0.1000 -40514.4095
##    240 10102180.1644             nan     0.1000 -67929.6603
##    260  9563780.9023             nan     0.1000 -62818.3967
##    280  9074817.5002             nan     0.1000 -40967.3510
##    300  8548022.4392             nan     0.1000 -58522.4976
##    320  8084975.0578             nan     0.1000 -46681.3032
##    340  7779275.7734             nan     0.1000 -76276.2326
##    360  7429389.6434             nan     0.1000 -51261.9091
##    380  7082323.6530             nan     0.1000 -39332.3646
##    400  6781452.0057             nan     0.1000 -35526.6846
##    420  6431383.7151             nan     0.1000 -10180.5703
##    440  6172859.4261             nan     0.1000 -60975.7916
##    460  5886311.5760             nan     0.1000 -45143.2775
##    480  5644788.3215             nan     0.1000 -46902.9067
##    500  5415316.4595             nan     0.1000 -19252.3049

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 7: manufacturerdodge has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 192349518.0690             nan     0.1000 35626050.6074
##      2 163115309.3281             nan     0.1000 26662657.1248
##      3 138984376.2573             nan     0.1000 22648541.2424
##      4 120007393.0177             nan     0.1000 19269633.4249
##      5 103841891.6315             nan     0.1000 15051314.4165
##      6 90944827.2546             nan     0.1000 11600819.3353
##      7 80500328.2464             nan     0.1000 10006744.5401
##      8 71052327.3830             nan     0.1000 8094161.1262
##      9 63852686.7821             nan     0.1000 6652332.0929
##     10 58086802.6935             nan     0.1000 5549941.7025
##     20 31676317.0830             nan     0.1000 812911.8396
##     40 20650284.1469             nan     0.1000 -4956.5742
##     60 17821586.7953             nan     0.1000 -34892.1329
##     80 15524926.2776             nan     0.1000 -19776.3240
##    100 13994987.0118             nan     0.1000 -174533.6013
##    120 12834052.3967             nan     0.1000 -94958.8191
##    140 11749249.5536             nan     0.1000 -74628.4309
##    160 10940127.1724             nan     0.1000 -60323.8570
##    180 10094664.5980             nan     0.1000 -38182.8933
##    200  9417103.2224             nan     0.1000 -74747.8714
##    220  8802398.0927             nan     0.1000 -45639.1565
##    240  8174007.8755             nan     0.1000 -87136.5647
##    260  7623339.2609             nan     0.1000 -26095.1977
##    280  7285557.9940             nan     0.1000 -62279.3837
##    300  6817014.3535             nan     0.1000 -33499.9212
##    320  6415518.6697             nan     0.1000 -32766.0250
##    340  6125003.3635             nan     0.1000 -41447.6971
##    360  5802916.9840             nan     0.1000 -49647.8775
##    380  5505591.9225             nan     0.1000 -30325.5312
##    400  5204023.5517             nan     0.1000 -37014.6331
##    420  4986664.3195             nan     0.1000 -29379.6209
##    440  4686209.2215             nan     0.1000 -29978.7881
##    460  4475094.6728             nan     0.1000 -14327.7768
##    480  4262699.8384             nan     0.1000 -28296.0518
##    500  4021825.0749             nan     0.1000 -13317.6548

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 7: manufacturerdodge has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191114680.1312             nan     0.1000 36363972.2426
##      2 162107661.0620             nan     0.1000 30088657.9378
##      3 138587171.2063             nan     0.1000 23193639.3825
##      4 120555630.0194             nan     0.1000 17839376.2474
##      5 104554883.7511             nan     0.1000 15453991.2625
##      6 91592645.2915             nan     0.1000 13150541.5577
##      7 80291811.7480             nan     0.1000 10321682.6320
##      8 71211343.0503             nan     0.1000 8295595.3655
##      9 64235408.4940             nan     0.1000 7735056.5576
##     10 58496786.2950             nan     0.1000 5533474.0951
##     20 30462222.6083             nan     0.1000 765799.7561
##     40 19770142.6859             nan     0.1000 16822.1855
##     60 16502349.2887             nan     0.1000 -37828.3963
##     80 14374290.4534             nan     0.1000 -56662.7539
##    100 12743199.4547             nan     0.1000 -90822.1086
##    120 11355853.3660             nan     0.1000 -51868.5637
##    140 10088581.2484             nan     0.1000 -19276.8491
##    160  9046223.1024             nan     0.1000 -34457.4619
##    180  8240022.4006             nan     0.1000 -19900.2942
##    200  7686107.5075             nan     0.1000 -26621.9809
##    220  7170401.2572             nan     0.1000 -59879.3931
##    240  6536210.3970             nan     0.1000 -30350.3314
##    260  6120969.0142             nan     0.1000 -62832.6402
##    280  5692995.0708             nan     0.1000 -40388.6893
##    300  5365467.3147             nan     0.1000 -29672.9477
##    320  5046336.3784             nan     0.1000 -10974.7015
##    340  4694364.3094             nan     0.1000 -21033.3651
##    360  4389813.3678             nan     0.1000 -23488.6327
##    380  4098723.1466             nan     0.1000 -40689.0691
##    400  3918551.6208             nan     0.1000 -15424.2262
##    420  3686913.1011             nan     0.1000 -31968.5552
##    440  3460377.0531             nan     0.1000 -16982.8716
##    460  3276954.7468             nan     0.1000 -34470.3001
##    480  3096959.4085             nan     0.1000 -32396.1757
##    500  2954668.2763             nan     0.1000 -24299.2655
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205296911.9986             nan     0.0500 12613510.2109
##      2 191782975.6680             nan     0.0500 13267232.5227
##      3 179962955.4277             nan     0.0500 11955896.2262
##      4 169337678.6294             nan     0.0500 10419328.8587
##      5 159724856.9354             nan     0.0500 9174952.4926
##      6 150970522.6357             nan     0.0500 8218312.8691
##      7 143285178.1133             nan     0.0500 7978695.6417
##      8 135872840.9259             nan     0.0500 7577071.9133
##      9 129199501.0601             nan     0.0500 6759295.8893
##     10 122913188.9898             nan     0.0500 6433111.0212
##     20 82855462.3600              nan     0.0500 2411499.4464
##     40 52839750.7476              nan     0.0500 902731.5513
##     60 40864021.3911              nan     0.0500 403755.3975
##     80 35149564.4038              nan     0.0500 203362.3472
##    100 32033515.3010              nan     0.0500 124487.7196
##    120 30370635.6064              nan     0.0500 31210.7342
##    140 28762899.4504              nan     0.0500 12745.0363
##    160 27741677.0224              nan     0.0500 3932.6617
##    180 26926200.1171              nan     0.0500 29930.1108
##    200 26121217.9026              nan     0.0500 6500.0767
##    220 25234602.7348              nan     0.0500 -23209.4344
##    240 24675172.8437              nan     0.0500 -46191.1432
##    260 24078136.9609              nan     0.0500 -23696.1089
##    280 23535102.8466              nan     0.0500 3751.1142
##    300 23049737.3973              nan     0.0500 -22258.1782
##    320 22638722.7464              nan     0.0500 9290.6454
##    340 22157736.3321              nan     0.0500 -24388.0494
##    360 21794157.9802              nan     0.0500 -20904.6488
##    380 21216433.2974              nan     0.0500 -48851.4990
##    400 20898935.7509              nan     0.0500 -33065.6949
```

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##    420 20548921.6823             nan     0.0500 -32192.6053
##    440 20229174.3159             nan     0.0500 -80337.6794
##    460 19866933.4436             nan     0.0500 -53405.1047
##    480 19676029.1400             nan     0.0500 -11527.3635
##    500 19375175.1500             nan     0.0500 -27827.3707

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203277007.2293             nan     0.0500 16285084.0220
##      2 188857266.8775             nan     0.0500 14709280.8330
##      3 175198932.8415             nan     0.0500 13034827.6403
##      4 163411699.9257             nan     0.0500 11205204.8081
##      5 153307878.1389             nan     0.0500 9728212.5764
##      6 143586235.6749             nan     0.0500 10044792.6442
##      7 134655896.0581             nan     0.0500 8398029.6208
##      8 126852459.2832             nan     0.0500 8026745.9552
##      9 119823398.8033             nan     0.0500 7247994.9237
##     10 113022123.0230             nan     0.0500 6959089.4563
##     20 71116327.5177              nan     0.0500 2738660.2670
##     40 42423106.6358              nan     0.0500 589069.8672
##     60 33046611.6000              nan     0.0500 175330.1114
##     80 28795816.2549              nan     0.0500 44973.9926
##    100 26415708.8876              nan     0.0500 -35837.7765
##    120 24734031.2225              nan     0.0500 -8070.1674
##    140 23506515.3027              nan     0.0500 15393.6961
##    160 22628310.9592              nan     0.0500 -11403.5609
##    180 21886619.4253              nan     0.0500 -57676.3829
##    200 21068942.0169              nan     0.0500 -8893.6454
##    220 20302180.4546              nan     0.0500 -3346.9601
##    240 19660762.0574              nan     0.0500 -41737.9712
##    260 19000557.1118              nan     0.0500 -27294.8475
##    280 18465533.7717              nan     0.0500 -25977.7246
```

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##    300 17996597.4137             nan     0.0500 -17816.4032
##    320 17660513.4116             nan     0.0500 -45317.8051
##    340 17104591.6784             nan     0.0500 -49391.0047
##    360 16639426.4548             nan     0.0500 -26809.2053
##    380 16222266.8930             nan     0.0500 -17585.5438
##    400 15928215.6920             nan     0.0500 -5936.3028
##    420 15608482.4943             nan     0.0500 -25892.7138
##    440 15364316.8235             nan     0.0500 -31264.5283
##    460 15019811.3399             nan     0.0500 7514.3555
##    480 14727804.1139             nan     0.0500 -33945.2964
##    500 14433063.2288             nan     0.0500 -20858.1788

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 202876819.6941             nan     0.0500 16786588.1379
##      2 187759013.4440             nan     0.0500 14786939.3679
##      3 173914791.4541             nan     0.0500 13242209.2631
##      4 161616081.8284             nan     0.0500 11893814.0169
##      5 150717617.0616             nan     0.0500 11006522.6285
##      6 141084686.2031             nan     0.0500 9250164.5488
##      7 131945432.3742             nan     0.0500 8781375.7050
##      8 123672973.2272             nan     0.0500 8307547.3055
##      9 116034763.1173             nan     0.0500 7190407.6528
##     10 109315851.7010             nan     0.0500 6994605.7711
##     20 65148367.5746              nan     0.0500 2517472.6050
##     40 37230828.2162              nan     0.0500 584806.1770
##     60 28986337.8829              nan     0.0500 90102.7480
##     80 24875491.9890              nan     0.0500 27737.7378
##    100 22526173.3642              nan     0.0500 -42137.9129
##    120 21111344.2426              nan     0.0500 42659.4034
##    140 20015952.1272              nan     0.0500 44589.1876
##    160 18935393.8442              nan     0.0500 -29098.3974
```

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##    180 17981763.1619             nan     0.0500 -27472.7159
##    200 17261820.2761             nan     0.0500 -53398.8440
##    220 16537035.8010             nan     0.0500 -18545.1473
##    240 15950440.5175             nan     0.0500 -16065.5105
##    260 15381267.5767             nan     0.0500 -46764.8216
##    280 14902396.5897             nan     0.0500 -15989.4050
##    300 14376745.9604             nan     0.0500 -25953.3959
##    320 13838155.3496             nan     0.0500 -16069.7799
##    340 13519803.3498             nan     0.0500 -69731.1760
##    360 13132847.0910             nan     0.0500 -20498.5771
##    380 12783381.6297             nan     0.0500 -20757.6793
##    400 12441381.2183             nan     0.0500 -20640.0724
##    420 12177896.3522             nan     0.0500 -62216.3321
##    440 11857117.7489             nan     0.0500 -46709.1756
##    460 11541926.2689             nan     0.0500 -12392.8704
##    480 11187342.2040             nan     0.0500 -8654.9053
##    500 10835906.4180             nan     0.0500 -12487.9670

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203247091.5695             nan     0.0500 15627944.6378
##      2 187563375.1410             nan     0.0500 14429406.6137
##      3 174125399.7947             nan     0.0500 12855406.1596
##      4 161461878.8485             nan     0.0500 12391106.8332
##      5 150090530.7318             nan     0.0500 11471561.3690
##      6 139431852.7561             nan     0.0500 10308139.1018
##      7 130313765.3011             nan     0.0500 8738168.5177
##      8 121772876.3359             nan     0.0500 8302090.7305
##      9 113569880.3214             nan     0.0500 8047726.2295
##     10 106539852.9830             nan     0.0500 7115585.1089
##     20 61194442.9929              nan     0.0500 2762289.4910
##     40 33792712.9611              nan     0.0500 565057.0565
```

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##     60 26199039.6007             nan     0.0500 62122.9643
##     80 22700017.9711             nan     0.0500 23418.0646
##    100 20350700.7706             nan     0.0500 30324.2625
##    120 18817807.2376             nan     0.0500 -19779.1749
##    140 17518854.2204             nan     0.0500 27426.9050
##    160 16532577.2494             nan     0.0500 -37712.6789
##    180 15599570.7427             nan     0.0500 -20062.4863
##    200 14888080.4971             nan     0.0500 12676.9692
##    220 14221820.7376             nan     0.0500 -55419.0224
##    240 13645928.5515             nan     0.0500 -47368.5516
##    260 13033977.1724             nan     0.0500 -43534.4961
##    280 12542371.3623             nan     0.0500 -31147.9432
##    300 12097611.3027             nan     0.0500 -19897.2034
##    320 11666716.0816             nan     0.0500 -27338.7400
##    340 11274613.6110             nan     0.0500 -5934.5891
##    360 10934315.1736             nan     0.0500 -27874.6750
##    380 10554242.1735             nan     0.0500 -14383.7659
##    400 10279950.9516             nan     0.0500 -41197.6638
##    420  9972500.2012             nan     0.0500 -17518.8475
##    440  9596352.7630             nan     0.0500 -34541.1166
##    460  9339563.2281             nan     0.0500 -11196.1648
##    480  9107654.1852             nan     0.0500 -17286.0732
##    500  8888307.5265             nan     0.0500 -16676.8338

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 201952941.3814             nan     0.0500 17925935.9733
##      2 186150893.1730             nan     0.0500 16096190.8725
##      3 171589463.8155             nan     0.0500 14465690.2656
##      4 159287297.3549             nan     0.0500 12392822.9096
##      5 147635018.5905             nan     0.0500 11938230.4512
##      6 136909887.9159             nan     0.0500 10189667.2591
```

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##      7 127664591.8679             nan     0.0500 9307503.3198
##      8 118871897.9532             nan     0.0500 8854661.4676
##      9 111062917.5811             nan     0.0500 7533722.7706
##     10 103832130.2896             nan     0.0500 6584851.1443
##     20 58120326.8502             nan     0.0500 3101710.9657
##     40 30808074.9511             nan     0.0500 472810.3264
##     60 23255750.6984             nan     0.0500 120870.3533
##     80 19657054.7381             nan     0.0500 9492.6678
##    100 17718699.4507             nan     0.0500 -1790.4591
##    120 16562650.9016             nan     0.0500 -82981.3088
##    140 15471865.4698             nan     0.0500 -94715.8640
##    160 14583278.7843             nan     0.0500 -62097.4488
##    180 13792371.0663             nan     0.0500 -25315.5941
##    200 13046174.3553             nan     0.0500 -43550.2479
##    220 12357541.1990             nan     0.0500 -28701.9380
##    240 11750977.7162             nan     0.0500 -16213.5922
##    260 11219315.0902             nan     0.0500 -52464.5148
##    280 10676887.3444             nan     0.0500 -39997.2926
##    300 10200793.0226             nan     0.0500 -75987.1686
##    320  9799978.2344             nan     0.0500 -68950.3830
##    340  9470434.9783             nan     0.0500 -37756.9096
##    360  9145501.8679             nan     0.0500 -32994.3265
##    380  8806803.9066             nan     0.0500 -53128.7270
##    400  8459273.5494             nan     0.0500 -62512.5105
##    420  8149821.7287             nan     0.0500 -32370.3845
##    440  7885286.6192             nan     0.0500 -31300.7035
##    460  7580168.3949             nan     0.0500 -19231.3766
##    480  7301234.1776             nan     0.0500 -16807.9815
##    500  7086443.8837             nan     0.0500 -41027.2942

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 202174401.6875             nan     0.0500 17434193.4934
##      2 186325764.7757             nan     0.0500 14326987.9165
##      3 171794281.4171             nan     0.0500 14243514.6196
##      4 158752542.8814             nan     0.0500 12523426.3742
##      5 146796885.1668             nan     0.0500 11692535.0902
##      6 136262408.9491             nan     0.0500 10841924.2767
##      7 126894532.6865             nan     0.0500 9066692.9495
##      8 117939372.2625             nan     0.0500 9030903.6928
##      9 109547856.0995             nan     0.0500 8122733.0382
##     10 101692177.9544             nan     0.0500 6598603.2114
##     20 56391737.1349              nan     0.0500 2526054.6106
##     40 29662794.9879              nan     0.0500 491811.5144
##     60 21991267.8396              nan     0.0500 54206.9675
##     80 18557749.2536              nan     0.0500 23512.9849
##    100 16601673.2920              nan     0.0500 -79785.3875
##    120 15063605.9759              nan     0.0500 -45868.2265
##    140 13955848.3094              nan     0.0500 -39532.1179
##    160 13071653.3040              nan     0.0500 -47433.7951
##    180 12241639.0289              nan     0.0500 -88228.5151
##    200 11574453.2459              nan     0.0500 17420.8635
##    220 10978674.3393              nan     0.0500 -53243.3520
##    240 10384383.5529              nan     0.0500 -49274.2060
##    260  9919953.0037              nan     0.0500 -39497.0085
##    280  9457188.8242              nan     0.0500 -33653.7255
##    300  9056432.0156              nan     0.0500 -17420.4604
##    320  8483014.1742              nan     0.0500 -30636.1572
##    340  8160270.2161              nan     0.0500 -30533.4150
##    360  7735096.6067              nan     0.0500 -29623.0851
##    380  7464626.3894              nan     0.0500 -20465.2635
##    400  7177179.8923              nan     0.0500 -21879.4313
##    420  6878325.8481              nan     0.0500 -17177.8410
##    440  6649006.2728              nan     0.0500 -16531.2992
##    460  6405227.7441              nan     0.0500 -28598.8876
##    480  6162550.7706              nan     0.0500 -18710.5485
##    500  5935764.8528              nan     0.0500 -16825.9363

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191755383.7315             nan     0.1000 28004817.0690
##      2 169321330.6079             nan     0.1000 23270987.4253
##      3 150205478.9497             nan     0.1000 18588430.3874
##      4 133902303.2377             nan     0.1000 14746998.6166
##      5 120809102.2173             nan     0.1000 13148172.2611
##      6 110471493.6309             nan     0.1000 10640237.5083
##      7 101740116.1735             nan     0.1000 7908350.5625
##      8 94209511.6077             nan     0.1000 7781699.7159
##      9 87496707.8067             nan     0.1000 6498901.1075
##     10 82390559.1986             nan     0.1000 5239446.5482
##     20 52447845.5897             nan     0.1000 1143095.9547
##     40 35741524.4628             nan     0.1000 10134.1740
##     60 30647646.4928             nan     0.1000 50026.1585
##     80 28036120.7671             nan     0.1000 -131970.6111
##    100 26332689.3247             nan     0.1000 17028.1965
##    120 24926917.7914             nan     0.1000 -301.9783
##    140 23831954.5665             nan     0.1000 33566.5462
##    160 22994255.6994             nan     0.1000 -76714.4282
##    180 22159330.6629             nan     0.1000 -90593.3293
##    200 21501810.8594             nan     0.1000 -10285.5857
##    220 20954455.1994             nan     0.1000 -56004.9573
##    240 20411340.7476             nan     0.1000 -60399.5480
##    260 19702593.6537             nan     0.1000 -62665.7245
##    280 19332491.6698             nan     0.1000 -53861.6175
##    300 18926188.5177             nan     0.1000 -43024.9326
##    320 18379394.7176             nan     0.1000 -59850.9970
##    340 17966558.1417             nan     0.1000 -83515.7264
##    360 17709483.7913             nan     0.1000 -16520.2811
##    380 17415060.4915             nan     0.1000 -35896.5863
##    400 17043003.8118             nan     0.1000 -98536.6756
##    420 16709527.9960             nan     0.1000 -50525.6974
##    440 16309975.2016             nan     0.1000 -76022.4973
##    460 15896862.6018             nan     0.1000 -33747.4774
##    480 15454565.2773             nan     0.1000 -24956.3019
##    500 15100345.0678             nan     0.1000 -28663.4362

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 189956647.7111             nan     0.1000 30319298.4819
##      2 165141258.3430             nan     0.1000 24944557.3120
##      3 145000655.8003             nan     0.1000 20510119.1808
##      4 127005014.4457             nan     0.1000 18847626.3920
##      5 113422859.4087             nan     0.1000 13851617.0407
##      6 101124117.5577             nan     0.1000 11361699.4034
##      7 91448505.2920             nan     0.1000 9753953.1000
##      8 82854620.5135             nan     0.1000 8205822.1761
##      9 75666985.9270             nan     0.1000 6997904.7852
##     10 69795246.6985             nan     0.1000 5057375.9079
##     20 41835701.4245             nan     0.1000 1425157.0138
##     40 28702806.5841             nan     0.1000 97499.6205
##     60 25072564.8791             nan     0.1000 99548.4606
##     80 22618989.0943             nan     0.1000 -89700.1037
##    100 20968446.5054             nan     0.1000 -114232.9399
##    120 19400386.3318             nan     0.1000 -29566.3117
##    140 18213263.7919             nan     0.1000 -47801.5714
##    160 17080448.2259             nan     0.1000 -38509.3792
##    180 16231733.1883             nan     0.1000 -68550.1106
##    200 15498969.3042             nan     0.1000 -38917.3541
##    220 14869217.6814             nan     0.1000 -19409.3729
##    240 14241888.3428             nan     0.1000 -88542.2196
##    260 13700567.3075             nan     0.1000 -52835.9898
##    280 13232129.3641             nan     0.1000 -15418.5196
##    300 12769440.3458             nan     0.1000 -76979.8701
##    320 12320318.0380             nan     0.1000 7820.6514
##    340 11890774.3836             nan     0.1000 -20614.7564
##    360 11526409.2006             nan     0.1000 -21293.6317
##    380 11130102.1819             nan     0.1000 -66698.9192
##    400 10821344.4763             nan     0.1000 -35002.0966
##    420 10501659.5750             nan     0.1000 -23524.0821
##    440 10174171.5055             nan     0.1000 -42462.6072
##    460  9873505.5973             nan     0.1000 -38030.7644
##    480  9613473.5032             nan     0.1000 -41295.3137
##    500  9350920.3398             nan     0.1000 -4247.1649

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 187200201.4657             nan     0.1000 33237917.2562
##      2 160830286.7428             nan     0.1000 25654961.3885
##      3 139364421.4459             nan     0.1000 21610097.4408
##      4 121399430.4566             nan     0.1000 17088447.5617
##      5 106030091.5088             nan     0.1000 14262901.4674
##      6 93154618.1972             nan     0.1000 12578477.6011
##      7 82910335.5289             nan     0.1000 8730930.2071
##      8 74876010.6226             nan     0.1000 8013367.6213
##      9 68160915.3994             nan     0.1000 5924621.1460
##     10 62254988.3736             nan     0.1000 5459087.0004
##     20 36309135.7596             nan     0.1000 1106484.2925
##     40 24606783.3468             nan     0.1000 -143455.8383
##     60 21226451.1978             nan     0.1000 -18494.7491
##     80 18705759.1520             nan     0.1000 -55233.3745
##    100 17026511.7746             nan     0.1000 -36550.2033
##    120 15885359.2900             nan     0.1000 -47831.3791
##    140 14712225.8977             nan     0.1000 -57092.3972
##    160 13733798.3233             nan     0.1000 -102711.4297
##    180 12961535.3114             nan     0.1000 -196110.6636
##    200 12348074.5280             nan     0.1000 -95240.6323
##    220 11734638.8025             nan     0.1000 -41889.0971
##    240 11213658.5914             nan     0.1000 -129810.3709
##    260 10619847.2362             nan     0.1000 -40647.6937
##    280 10189257.2558             nan     0.1000 -71054.9448
##    300  9757648.2567             nan     0.1000 -57300.6282
##    320  9404209.3568             nan     0.1000 -94709.3665
##    340  8984465.2240             nan     0.1000 6618.3228
##    360  8569432.7621             nan     0.1000 -38312.9471
##    380  8202036.8622             nan     0.1000 -33556.0173
##    400  7900150.0007             nan     0.1000 -16844.0628
##    420  7579822.2897             nan     0.1000 -19638.5523
##    440  7332715.1712             nan     0.1000 -55585.5122
##    460  7114794.2797             nan     0.1000 -43979.2986
##    480  6811878.0859             nan     0.1000 -28108.0966
##    500  6618563.7760             nan     0.1000 -36252.2817

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 186721603.8195             nan     0.1000 32990898.4170
##      2 159960555.2823             nan     0.1000 25423907.3182
##      3 137696204.9717             nan     0.1000 22057658.4949
##      4 119152131.0834             nan     0.1000 18531034.2269
##      5 104802705.1120             nan     0.1000 14199896.1960
##      6 92788222.6519             nan     0.1000 11189715.4036
##      7 83274847.4247             nan     0.1000 9800874.6606
##      8 74474309.3912             nan     0.1000 8175104.1849
##      9 66860384.9822             nan     0.1000 7381458.5376
##     10 60947907.9085             nan     0.1000 5571506.6495
##     20 33406922.3993             nan     0.1000 967719.7346
##     40 22583661.8036             nan     0.1000 22593.4177
##     60 19074281.7130             nan     0.1000 3705.9127
##     80 16687144.1264             nan     0.1000 82389.5742
##    100 15121581.9045             nan     0.1000 -101408.6899
##    120 14164950.2256             nan     0.1000 -96954.2019
##    140 12990957.9150             nan     0.1000 -23510.8872
##    160 12204080.3688             nan     0.1000 -14245.3586
##    180 11326368.3104             nan     0.1000 -72383.8943
##    200 10582266.4167             nan     0.1000 -69464.1614
##    220  9926766.0392             nan     0.1000 -65838.1447
##    240  9354275.2422             nan     0.1000 -34930.1142
##    260  8777599.9144             nan     0.1000 -37048.3997
##    280  8306060.5961             nan     0.1000 -113638.7007
##    300  7914724.9930             nan     0.1000 -40264.8108
##    320  7547696.1201             nan     0.1000 -33633.5453
##    340  7112989.5526             nan     0.1000 -69225.2620
##    360  6704134.2134             nan     0.1000 -32580.8115
##    380  6456490.1115             nan     0.1000 -16526.6919
##    400  6114010.8915             nan     0.1000 -50318.2634
##    420  5837510.4375             nan     0.1000 -26793.5682
##    440  5589022.6507             nan     0.1000 -25547.4435
##    460  5374731.1452             nan     0.1000 -16388.1222
##    480  5170069.4945             nan     0.1000 -19694.4480
##    500  4988545.2002             nan     0.1000 -21583.1685

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 185092364.9228             nan     0.1000 33302420.8805
##      2 157254103.9981             nan     0.1000 26993364.0626
##      3 135049955.7548             nan     0.1000 22297402.0907
##      4 116410274.9370             nan     0.1000 17372882.3967
##      5 101862886.5491             nan     0.1000 14534339.7501
##      6 89723733.7808             nan     0.1000 12205995.1385
##      7 79688021.6320             nan     0.1000 10260593.7017
##      8 70734317.9006             nan     0.1000 8530721.9120
##      9 63330489.3031             nan     0.1000 7072234.8799
##     10 57166450.1985             nan     0.1000 5537955.9358
##     20 30762186.7290             nan     0.1000 1274229.1317
##     40 20389708.7154             nan     0.1000 -32782.8838
##     60 16867710.5077             nan     0.1000 -46977.9945
##     80 14319553.7753             nan     0.1000 11942.5463
##    100 12808413.9988             nan     0.1000 -66669.3112
##    120 11765713.0711             nan     0.1000 -61116.8845
##    140 10636966.6444             nan     0.1000 -75062.6436
##    160  9757165.1657             nan     0.1000 -78576.5095
##    180  9140597.1178             nan     0.1000 -78853.1600
##    200  8532934.4193             nan     0.1000 -55157.5705
##    220  7967879.8788             nan     0.1000 -2479.9999
##    240  7403652.9551             nan     0.1000 -41558.6014
##    260  6976848.0601             nan     0.1000 -31065.6825
##    280  6529644.3008             nan     0.1000 -20207.6639
##    300  6029480.4315             nan     0.1000 -39242.9285
##    320  5682194.0998             nan     0.1000 -40950.0073
##    340  5442005.6132             nan     0.1000 -37603.1485
##    360  5145379.2522             nan     0.1000 -19868.1712
##    380  4889815.8945             nan     0.1000 -20353.2081
##    400  4609687.7909             nan     0.1000 -19696.0083
##    420  4396600.7465             nan     0.1000 -19673.6083
##    440  4181743.0036             nan     0.1000 -28409.1323
##    460  4000371.4263             nan     0.1000 -24296.1295
##    480  3794247.4737             nan     0.1000 -47303.6429
##    500  3635458.4415             nan     0.1000 -29796.9387

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 185184069.3549             nan     0.1000 36383731.9973
##      2 158510001.7465             nan     0.1000 27227241.5681
##      3 135315121.2602             nan     0.1000 22801072.2252
##      4 116527790.3385             nan     0.1000 18196405.1199
##      5 100676570.6875             nan     0.1000 14008274.2161
##      6 88206967.3498             nan     0.1000 12169268.0355
##      7 78251566.7205             nan     0.1000 9519364.3856
##      8 69752032.8026             nan     0.1000 8586161.6983
##      9 62449378.2026             nan     0.1000 6938912.4414
##     10 56789997.1824             nan     0.1000 5638406.6764
##     20 29782167.3652             nan     0.1000 1028074.6001
##     40 18399040.5494             nan     0.1000 76655.9453
##     60 14962563.8028             nan     0.1000 -80038.1352
##     80 13153355.6748             nan     0.1000 -92868.6620
##    100 11692721.0870             nan     0.1000 -55041.8004
##    120 10385992.2701             nan     0.1000 -71238.6981
##    140  9328151.1454             nan     0.1000 -30730.8681
##    160  8412248.5949             nan     0.1000 -19941.5954
##    180  7741431.7447             nan     0.1000 -58130.7576
##    200  7150470.4218             nan     0.1000 -41514.7724
##    220  6587554.0702             nan     0.1000 -41398.4800
##    240  6110186.5363             nan     0.1000 -49019.5167
##    260  5642443.7680             nan     0.1000 -38552.4163
##    280  5210191.7531             nan     0.1000 -37661.5289
##    300  4856451.9283             nan     0.1000 -24854.2414
##    320  4565119.4496             nan     0.1000 -19087.3147
##    340  4272942.9871             nan     0.1000 -42582.9212
##    360  3987749.5969             nan     0.1000 -20953.2129
##    380  3750984.2785             nan     0.1000 -26464.0094
##    400  3550148.6528             nan     0.1000 -42958.9175
##    420  3364202.6880             nan     0.1000  602.2665
##    440  3161860.2600             nan     0.1000 -37079.3924
##    460  2990637.8342             nan     0.1000 -18510.3501
##    480  2812625.9530             nan     0.1000 -24750.4766
##    500  2672481.2071             nan     0.1000 -23434.1076
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205393565.1158             nan     0.0500 14905797.6110
##      2 192122359.7551             nan     0.0500 13121559.0608
##      3 180146630.2034             nan     0.0500 11919970.5393
##      4 168945126.1068             nan     0.0500 9895006.3942
##      5 158990670.6336             nan     0.0500 10215487.4217
##      6 149885477.5605             nan     0.0500 9257558.6653
##      7 141462817.4036             nan     0.0500 7889511.7615
##      8 133979323.2094             nan     0.0500 7630397.4340
##      9 126865025.9632             nan     0.0500 6888114.8987
##     10 120377212.7936             nan     0.0500 6210042.3589
##     20 80666899.4393              nan     0.0500 2608097.3195
##     40 52042192.9240              nan     0.0500 885808.1880
##     60 41268430.5372              nan     0.0500 225965.4958
##     80 36250721.9489              nan     0.0500 27046.6334
##    100 33430387.5933              nan     0.0500 -4879.5704
##    120 31691493.5983              nan     0.0500 7454.9870
##    140 30237245.9423              nan     0.0500 27734.4300
##    160 29242031.8855              nan     0.0500 45206.3201
##    180 28087753.2913              nan     0.0500 -50493.1196
##    200 27303374.2522              nan     0.0500 -64683.3983
##    220 26515729.0533              nan     0.0500 -44763.4570
##    240 25990717.0325              nan     0.0500 -63601.5165
##    260 25196457.5681              nan     0.0500 -3271.8998
##    280 24649541.2230              nan     0.0500 -18712.9572
##    300 24111404.5205              nan     0.0500 -21345.3428
##    320 23716402.3681              nan     0.0500 -44891.9320
##    340 23338967.9411              nan     0.0500 -72588.9904
```

```
##    360 22807976.9025             nan     0.0500 10894.6557
##    380 22427209.6418             nan     0.0500 -30037.5657
##    400 22039079.7005             nan     0.0500 -43945.9466
##    420 21662647.7078             nan     0.0500 -27430.3116
##    440 21336766.5220             nan     0.0500 -20279.0940
##    460 21078256.0549             nan     0.0500 -31568.5537
##    480 20777980.6028             nan     0.0500 -30381.5865
##    500 20484097.2252             nan     0.0500 -36097.1980

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203911748.0597             nan     0.0500 16417024.6273
##      2 189418291.6486             nan     0.0500 13789526.8402
##      3 176872146.1694             nan     0.0500 12941007.1429
##      4 165006067.9013             nan     0.0500 11147412.9790
##      5 153879361.2488             nan     0.0500 10854287.3910
##      6 143903173.3181             nan     0.0500 9738904.1401
##      7 134823562.1540             nan     0.0500 9312901.5609
##      8 126552017.6940             nan     0.0500 7534482.0261
##      9 118856550.6065             nan     0.0500 7469518.2159
##     10 111995731.7987             nan     0.0500 6625380.7798
##     20 69636046.2350             nan     0.0500 2720579.4781
##     40 42246530.7459             nan     0.0500 628992.7762
##     60 33654421.8475             nan     0.0500 131147.6901
##     80 29733907.2030             nan     0.0500 31477.4250
##    100 27630398.5588             nan     0.0500 36347.8414
##    120 26040824.3580             nan     0.0500 -16777.9551
##    140 24711676.8609             nan     0.0500 40419.0885
##    160 23679670.5862             nan     0.0500 -14132.5829
```

```
##    180 22765534.5071             nan     0.0500 -12807.6315
##    200 21860896.7381             nan     0.0500 -3513.1553
##    220 21052522.7535             nan     0.0500 -71438.2620
##    240 20439039.2859             nan     0.0500 -31404.7991
##    260 19804674.1906             nan     0.0500 -8438.4800
##    280 19275564.5496             nan     0.0500 -50355.9388
##    300 18810656.0674             nan     0.0500 -20690.1451
##    320 18410647.0939             nan     0.0500 -65821.2818
##    340 17975838.6735             nan     0.0500 -34269.3663
##    360 17518225.1104             nan     0.0500 -26717.4058
##    380 17128654.6169             nan     0.0500 -23594.8737
##    400 16686613.6639             nan     0.0500 -14908.9704
##    420 16335623.8448             nan     0.0500 -36939.0830
##    440 16017003.3366             nan     0.0500 -31593.3970
##    460 15621786.7034             nan     0.0500 11018.4139
##    480 15201541.0637             nan     0.0500 -26479.2457
##    500 14932934.0710             nan     0.0500 -15668.2759

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 204323525.8833             nan     0.0500 16003564.8194
##      2 189456219.9591             nan     0.0500 14025464.2675
##      3 176070585.8229             nan     0.0500 13864126.2283
##      4 163649437.9507             nan     0.0500 12680241.2937
##      5 152009665.1730             nan     0.0500 11246573.1113
##      6 141426369.7812             nan     0.0500 10418242.6287
##      7 132431252.0583             nan     0.0500 8952743.7102
##      8 124481984.0790             nan     0.0500 7800733.1224
##      9 116508868.6644             nan     0.0500 7228607.0594
```

```
##     10 109581029.5948            nan     0.0500 6901939.2969
##     20 65394674.9391             nan     0.0500 2207174.1624
##     40 37311689.6530             nan     0.0500 612900.7110
##     60 29839636.1648             nan     0.0500 99227.9608
##     80 26486497.5565             nan     0.0500 -57400.9911
##    100 24507305.8344             nan     0.0500 -14906.0945
##    120 22874427.8828             nan     0.0500 -10424.8046
##    140 21482264.2194             nan     0.0500 -70396.5809
##    160 20383006.4968             nan     0.0500 -65554.7089
##    180 19458331.8093             nan     0.0500 -76617.5455
##    200 18701531.6143             nan     0.0500 -55464.2062
##    220 18104515.9890             nan     0.0500 -37820.9125
##    240 17440646.5903             nan     0.0500 -52015.4537
##    260 16740960.3775             nan     0.0500 -32266.0112
##    280 16112960.5595             nan     0.0500 -43784.0788
##    300 15565316.5997             nan     0.0500 -13537.9117
##    320 15044390.7765             nan     0.0500 -73830.8141
##    340 14578991.4043             nan     0.0500 -39030.8734
##    360 14215174.8542             nan     0.0500 -75777.2795
##    380 13844856.9427             nan     0.0500 -28039.4228
##    400 13495775.0154             nan     0.0500 -9752.3496
##    420 13121596.0611             nan     0.0500 -25456.5501
##    440 12768868.7104             nan     0.0500 -13531.6457
##    460 12455821.8490             nan     0.0500 -31109.3359
##    480 12201066.7027             nan     0.0500 -25040.9864
##    500 11922652.0392             nan     0.0500 -7585.2620

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 204199716.6505             nan     0.0500 15747836.8324
##      2 188583655.1537             nan     0.0500 15408328.1930
##      3 174802673.4326             nan     0.0500 14512798.6334
##      4 162179446.6956             nan     0.0500 13289667.3202
##      5 150622236.1942             nan     0.0500 12119909.0365
##      6 140062836.1723             nan     0.0500 10494972.8928
##      7 130678440.0311             nan     0.0500 9474717.8205
##      8 121680132.4892             nan     0.0500 8331795.0636
##      9 113441798.4040             nan     0.0500 8138877.1778
##     10 105958692.2813             nan     0.0500 7358179.1925
##     20 61174315.4535             nan     0.0500 2609530.3505
##     40 34285579.2380             nan     0.0500 410195.4155
##     60 26731139.4071             nan     0.0500 194996.5885
##     80 23380096.8568             nan     0.0500 104314.5511
##    100 21399506.1009             nan     0.0500 -89658.6839
##    120 20034622.6414             nan     0.0500 -68361.1610
##    140 18713562.2056             nan     0.0500 -35834.0474
##    160 17756207.2480             nan     0.0500 -14491.4963
##    180 16966724.0406             nan     0.0500 -31416.7209
##    200 16315797.6697             nan     0.0500 -59174.4592
##    220 15486156.8578             nan     0.0500 -23017.4324
##    240 14855927.3001             nan     0.0500 -66041.9560
##    260 14258226.9632             nan     0.0500 -9208.3630
##    280 13769501.0307             nan     0.0500 -19855.0710
##    300 13267234.0445             nan     0.0500 -57648.6504
##    320 12833627.8104             nan     0.0500 -31222.5328
##    340 12408871.7662             nan     0.0500 -17492.0233
##    360 12078680.1484             nan     0.0500 -46964.3605
##    380 11628450.7540             nan     0.0500 -23318.9728
##    400 11250785.3997             nan     0.0500 -21207.3094
##    420 10942196.4796             nan     0.0500 -8840.1366
##    440 10526414.7028             nan     0.0500 -47960.2447
##    460 10231328.3601             nan     0.0500 -34137.3733
##    480  9871361.8487             nan     0.0500 -33018.2546
##    500  9604909.2479             nan     0.0500 -12574.4363

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203343242.6483             nan     0.0500 17132576.6551
##      2 187482120.9610             nan     0.0500 15399525.5885
##      3 173018577.6133             nan     0.0500 13375240.7007
##      4 160266500.7034             nan     0.0500 12301985.8306
##      5 148385505.3688             nan     0.0500 11628621.5933
##      6 137555650.9086             nan     0.0500 10763793.1211
##      7 127989143.6318             nan     0.0500 9287001.2280
##      8 119427069.2515             nan     0.0500 8043726.4300
##      9 111275101.0714             nan     0.0500 8060265.8954
##     10 104514708.6655             nan     0.0500 6731612.5006
##     20 58923450.1952              nan     0.0500 2784045.8838
##     40 31876920.2834              nan     0.0500 395524.7413
##     60 24489805.5728              nan     0.0500 45139.7444
##     80 21483679.3174              nan     0.0500 -30544.9607
##    100 19403199.4100              nan     0.0500 27664.5739
##    120 18013988.7029              nan     0.0500 -66413.3678
##    140 16900364.8722              nan     0.0500 -16786.3993
##    160 15845522.4022              nan     0.0500 -41088.7330
##    180 15045589.2026              nan     0.0500 -37603.4565
##    200 14344686.7333              nan     0.0500 -41990.4906
##    220 13670358.3961              nan     0.0500 -37563.2536
##    240 13105430.3508              nan     0.0500 -77166.8773
##    260 12464725.1543              nan     0.0500 -31797.2313
##    280 11893819.3739              nan     0.0500 -17013.7317
##    300 11325353.4517              nan     0.0500 -40679.4042
##    320 10813798.0827              nan     0.0500 -45618.0379
##    340 10370266.1634              nan     0.0500 -14281.0555
##    360 10034484.5819              nan     0.0500 -26352.5607
##    380  9619614.3725              nan     0.0500 -18322.9343
##    400  9220277.7708              nan     0.0500 -30116.7556
##    420  8839752.6655              nan     0.0500 -25645.2785
##    440  8493359.6651              nan     0.0500 -39911.9694
##    460  8199070.1938              nan     0.0500 -22090.2446
##    480  7923870.8303              nan     0.0500 -33259.2196
##    500  7656672.7768              nan     0.0500 -21188.7415

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 202401530.1382             nan     0.0500 17980704.3886
##      2 186093610.5784             nan     0.0500 15307616.9506
##      3 172030014.1874             nan     0.0500 14096140.0166
##      4 158709551.0365             nan     0.0500 13345924.8522
##      5 146478655.2292             nan     0.0500 12748942.3659
##      6 135383095.1719             nan     0.0500 10059858.7050
##      7 125994602.1823             nan     0.0500 9505732.8031
##      8 117273702.5658             nan     0.0500 9047671.9554
##      9 109292356.9127             nan     0.0500 7839875.4109
##     10 101804821.5343             nan     0.0500 7220909.6024
##     20 57559729.7662              nan     0.0500 2566996.2115
##     40 30075410.4172              nan     0.0500 560324.7122
##     60 23141093.9752              nan     0.0500 11521.9795
##     80 19781883.9630              nan     0.0500 -51165.2739
##    100 17774213.1700              nan     0.0500 -25627.7186
##    120 16343997.0627              nan     0.0500 -20839.3865
##    140 15155805.4076              nan     0.0500 -39765.4867
##    160 14290326.6860              nan     0.0500 -49913.3172
##    180 13282051.8597              nan     0.0500 -19526.5932
##    200 12456430.4325              nan     0.0500 -18447.4409
##    220 11706388.6932              nan     0.0500 -36418.0504
##    240 11012605.0657              nan     0.0500 -44118.2448
##    260 10337733.9841              nan     0.0500 -23927.6248
##    280  9844979.6956              nan     0.0500 -3814.7235
##    300  9350919.7137              nan     0.0500 -28937.4392
##    320  8945162.0720              nan     0.0500 -34112.1942
##    340  8506191.2708              nan     0.0500 -22517.0000
##    360  8121383.4289              nan     0.0500 -22817.0813
##    380  7723237.3297              nan     0.0500 -19109.4732
##    400  7410482.2971              nan     0.0500 -18156.4935
##    420  7064620.3320              nan     0.0500 -28432.8426
##    440  6805121.0876              nan     0.0500 -7938.6691
##    460  6573690.6104              nan     0.0500 -44817.5371
##    480  6327051.4144              nan     0.0500 -27831.8861
##    500  6105586.3058              nan     0.0500 -13750.1329

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191578265.4992             nan     0.1000 29047605.9491
##      2 167751577.0136             nan     0.1000 23810514.2040
##      3 148400481.6299             nan     0.1000 19218812.2055
##      4 132713937.1531             nan     0.1000 15106801.4473
##      5 119953607.7019             nan     0.1000 13069427.9008
##      6 108177867.2466             nan     0.1000 10587316.1162
##      7 98684016.8034              nan     0.1000 9108876.4816
##      8 90828352.0207              nan     0.1000 7550826.9643
##      9 84041152.8853              nan     0.1000 6311641.0877
##     10 78853738.4355              nan     0.1000 5112961.4556
##     20 51194186.2423              nan     0.1000 1877316.0881
##     40 35690379.7628              nan     0.1000 300883.9974
##     60 31296362.2992              nan     0.1000 48389.5463
##     80 29115539.1584              nan     0.1000 89481.5231
##    100 27133714.6444              nan     0.1000 85738.0022
##    120 25849573.9620              nan     0.1000 -162508.5027
##    140 24761128.7333              nan     0.1000 -127622.6845
##    160 24001288.4342              nan     0.1000 -25867.1675
##    180 23315796.8050              nan     0.1000 -73246.8671
##    200 22704521.4630              nan     0.1000 -43482.1076
##    220 21825447.0870              nan     0.1000 -48303.6400
##    240 21134751.1745              nan     0.1000 -42576.0485
##    260 20505692.9136              nan     0.1000 -43366.8892
##    280 20029181.9307              nan     0.1000 -79791.0455
##    300 19586041.2352              nan     0.1000 -54586.0812
##    320 19098409.7788              nan     0.1000 -45596.4728
##    340 18663584.6058              nan     0.1000 -46304.3066
##    360 18330627.8006              nan     0.1000 -29176.2310
##    380 17787862.4535              nan     0.1000 -30023.0486
##    400 17364169.7172              nan     0.1000 -14944.1942
##    420 17062705.8431              nan     0.1000 -59363.8746
##    440 16706653.7339              nan     0.1000 -79334.9332
##    460 16420385.1383              nan     0.1000 -100121.1652
##    480 16149609.7181              nan     0.1000 -80510.1092
##    500 15766456.8891              nan     0.1000 -65590.3677
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188486870.6325             nan     0.1000 30183822.2036
##      2 162840675.9800             nan     0.1000 25139757.8819
##      3 141219185.7199             nan     0.1000 20330433.2985
##      4 124390632.1893             nan     0.1000 16160002.9145
##      5 110352035.4025             nan     0.1000 13971621.5461
##      6 98616610.7488              nan     0.1000 11833644.6449
##      7 88983266.3006              nan     0.1000 9369697.5616
##      8 80582634.8106              nan     0.1000 8483258.7365
##      9 73861129.1782              nan     0.1000 6500780.8574
##     10 68291913.7768              nan     0.1000 5702215.9040
##     20 41460008.1708              nan     0.1000 1148611.7291
##     40 29682074.2528              nan     0.1000 43971.2230
##     60 26544656.5291              nan     0.1000 -58575.4890
##     80 24393531.3602              nan     0.1000 -59590.8056
##    100 22687373.4104              nan     0.1000 -105211.1420
##    120 21478679.2691              nan     0.1000 -81721.4125
##    140 20250643.8442              nan     0.1000 4652.8461
##    160 19398654.3213              nan     0.1000 -43660.2000
##    180 18332836.2631              nan     0.1000 8244.3037
##    200 17765828.0751              nan     0.1000 -53404.1991
##    220 17114686.7896              nan     0.1000 -90506.8293
##    240 16516440.4079              nan     0.1000 -61734.2875
##    260 15781429.7557              nan     0.1000 -34793.9970
##    280 15324054.4021              nan     0.1000 -46953.7974
##    300 14767813.7790              nan     0.1000 -47843.0861
##    320 14179149.6005              nan     0.1000 -59801.0135
##    340 13610651.3106              nan     0.1000 -27618.1561
```

```
##    360 13267248.5731             nan     0.1000 -86413.1625
##    380 12840825.5904             nan     0.1000 -47830.0533
##    400 12475414.9135             nan     0.1000 -37588.3587
##    420 11947574.5819             nan     0.1000 -48728.4453
##    440 11577914.1727             nan     0.1000 -32316.0992
##    460 11239133.3333             nan     0.1000 -20095.5443
##    480 10904019.9781             nan     0.1000 -776.9669
##    500 10659277.4566             nan     0.1000 -62256.7478

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 187750092.6862             nan     0.1000 33245197.2554
##      2 160972402.6813             nan     0.1000 26907098.9874
##      3 139885982.9497             nan     0.1000 22176543.8236
##      4 121648157.8648             nan     0.1000 17966983.4793
##      5 106388937.0813             nan     0.1000 14377796.4861
##      6 94794999.6952             nan     0.1000 11766352.8712
##      7 84713458.2481             nan     0.1000 10335687.1846
##      8 75758645.6205             nan     0.1000 8352379.2628
##      9 68842197.5943             nan     0.1000 6195005.7151
##     10 63406199.4791             nan     0.1000 5092213.2256
##     20 37111067.4151             nan     0.1000 893510.9089
##     40 26504667.3650             nan     0.1000 84571.3460
##     60 23068253.2018             nan     0.1000 -146452.0501
##     80 20715144.8303             nan     0.1000 -73239.7321
##    100 18755516.8430             nan     0.1000 -41320.8930
##    120 17429363.4658             nan     0.1000 -63522.8020
##    140 16009862.1975             nan     0.1000 -30130.1468
##    160 15060339.0947             nan     0.1000 -123084.4386
```

```
##    180 14171443.2892             nan     0.1000 -34019.8780
##    200 13455112.3190             nan     0.1000 -76694.7746
##    220 12862611.9390             nan     0.1000 -66628.7071
##    240 12141598.7747             nan     0.1000 -29771.0054
##    260 11514106.0609             nan     0.1000 -64876.0873
##    280 10936046.6287             nan     0.1000 -22915.0000
##    300 10405338.0862             nan     0.1000 -42140.2698
##    320  9866468.0315             nan     0.1000 -17339.8892
##    340  9476795.7323             nan     0.1000 -23461.6935
##    360  9084279.1825             nan     0.1000 -20061.6552
##    380  8641735.5726             nan     0.1000 -34516.2654
##    400  8307854.2821             nan     0.1000 -70870.8591
##    420  7832731.9854             nan     0.1000 -30609.9794
##    440  7556154.0472             nan     0.1000 -25587.1305
##    460  7278390.9474             nan     0.1000 -6539.0191
##    480  7007358.0505             nan     0.1000 -33567.8095
##    500  6727008.0430             nan     0.1000 -42773.2848

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188282981.2858             nan     0.1000 30627491.9617
##      2 162545790.9721             nan     0.1000 25955158.0734
##      3 139939525.4302             nan     0.1000 22105908.4538
##      4 121167195.6183             nan     0.1000 19256956.3986
##      5 105343352.5512             nan     0.1000 14634295.9771
##      6 92816124.0435             nan     0.1000 12461382.9379
##      7 82506827.1543             nan     0.1000 10121116.1013
##      8 73624192.1159             nan     0.1000 8104411.1514
##      9 66204988.7342             nan     0.1000 7097791.8306
```

```
##     10 60563230.7526             nan     0.1000 5570239.0728
##     20 33979873.9160             nan     0.1000 623963.3064
##     40 23519132.7579             nan     0.1000 70755.6838
##     60 19938611.7265             nan     0.1000 -5931.0167
##     80 17571663.8829             nan     0.1000 33582.1812
##    100 15725810.6887             nan     0.1000 -39851.4643
##    120 14275171.1336             nan     0.1000 -90774.4884
##    140 13120174.0365             nan     0.1000 -34875.9321
##    160 12314797.0774             nan     0.1000 12492.4828
##    180 11567310.7601             nan     0.1000 -63055.2273
##    200 10939507.9975             nan     0.1000 -43227.5377
##    220 10265638.3959             nan     0.1000 -161182.7195
##    240  9599571.4984             nan     0.1000 -85564.0429
##    260  9190134.2087             nan     0.1000 -52230.8865
##    280  8687679.3095             nan     0.1000 -64209.7203
##    300  8257074.0209             nan     0.1000 -55737.5137
##    320  7833287.9889             nan     0.1000 -55221.5978
##    340  7510533.8184             nan     0.1000 -42101.6477
##    360  7110314.1752             nan     0.1000 -42199.9572
##    380  6755376.3766             nan     0.1000 -8809.2938
##    400  6473378.3527             nan     0.1000 -14155.3558
##    420  6148737.3578             nan     0.1000 -60108.0960
##    440  5831849.9950             nan     0.1000 -21556.1406
##    460  5573612.0799             nan     0.1000 -30209.7542
##    480  5338654.2720             nan     0.1000 -41705.1853
##    500  5130673.4611             nan     0.1000 -26030.0496

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 186256427.9174             nan     0.1000 34216910.9555
##      2 157960520.5671             nan     0.1000 26560875.7427
##      3 135169056.0108             nan     0.1000 21712419.4858
##      4 117983466.4400             nan     0.1000 17320234.3125
##      5 102389740.9154             nan     0.1000 14785138.2128
##      6 89150228.8839              nan     0.1000 11880763.3699
##      7 79429427.9941              nan     0.1000 9798141.7265
##      8 71077484.3414              nan     0.1000 8075169.0081
##      9 63887753.2957              nan     0.1000 6060221.2058
##     10 57948246.2037              nan     0.1000 5229028.6871
##     20 31884455.4100              nan     0.1000 1047911.4437
##     40 21835853.2483              nan     0.1000 -28352.0166
##     60 18043197.7409              nan     0.1000 -35477.9392
##     80 16083484.3763              nan     0.1000 -16737.3468
##    100 14257974.9882              nan     0.1000 -51758.4308
##    120 12827985.4668              nan     0.1000 -128397.0041
##    140 11969798.0779              nan     0.1000 -35610.5637
##    160 11002101.4870              nan     0.1000 -43835.5229
##    180 10127702.5978              nan     0.1000 -120437.3914
##    200  9393593.7400              nan     0.1000 -49416.1623
##    220  8785512.8306              nan     0.1000 -54367.6224
##    240  8130918.9691              nan     0.1000 -22814.9534
##    260  7560957.4330              nan     0.1000 -19364.6361
##    280  7052416.6910              nan     0.1000 -18166.8732
##    300  6634803.5555              nan     0.1000 -26169.2862
##    320  6344415.2358              nan     0.1000 -40259.1931
##    340  5947081.4195              nan     0.1000 -47543.9036
##    360  5632194.9593              nan     0.1000 -35116.3775
##    380  5319018.1612              nan     0.1000 -9423.3971
##    400  5074993.4197              nan     0.1000 -33641.3015
##    420  4848474.3141              nan     0.1000 -58017.4911
##    440  4578586.2141              nan     0.1000 -20618.2424
##    460  4362463.4658              nan     0.1000 -24320.3647
##    480  4159184.5746              nan     0.1000 -31897.6734
##    500  3992259.4900              nan     0.1000 -22461.2949

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 14: manufacturerjaguar has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 186516565.7654             nan     0.1000 33424012.9292
##      2 158535344.2814             nan     0.1000 29633421.1490
##      3 135394545.8233             nan     0.1000 22891000.2397
##      4 116506835.8033             nan     0.1000 18419536.5906
##      5 100895360.9707             nan     0.1000 15742597.0155
##      6 87587366.6427             nan     0.1000 12682319.8262
##      7 77233928.6609             nan     0.1000 9748917.5758
##      8 68313497.8617             nan     0.1000 8467195.2834
##      9 60894643.6063             nan     0.1000 6947231.9736
##     10 55426515.8205             nan     0.1000 5537734.3267
##     20 29822056.2108             nan     0.1000 807906.2922
##     40 20170338.6812             nan     0.1000 -49124.8368
##     60 16802632.7009             nan     0.1000 -23886.1670
##     80 14556950.8505             nan     0.1000 -129172.9359
##    100 12806681.4580             nan     0.1000 -100961.4892
##    120 11583694.3192             nan     0.1000 -80647.2881
##    140 10390687.8210             nan     0.1000 -62828.2036
##    160  9417425.3931             nan     0.1000 -56615.7426
##    180  8733889.3982             nan     0.1000 -112702.8873
##    200  8021876.4484             nan     0.1000 -59262.0636
##    220  7420826.8891             nan     0.1000 -27213.0082
##    240  6805479.5987             nan     0.1000 -89019.6857
##    260  6341577.5627             nan     0.1000 -40405.7827
##    280  5906370.6105             nan     0.1000 -16741.5901
##    300  5593000.5285             nan     0.1000 -61134.5354
##    320  5223883.1568             nan     0.1000 -60362.6504
##    340  4879649.7045             nan     0.1000 -12993.9443
##    360  4547156.8221             nan     0.1000 -33730.7637
##    380  4271864.7486             nan     0.1000 -35604.9001
##    400  3994887.2608             nan     0.1000 -25019.8732
##    420  3771579.3453             nan     0.1000 -58667.7713
##    440  3575219.8751             nan     0.1000 -28915.4063
##    460  3393909.7009             nan     0.1000 -13613.1943
##    480  3201365.9211             nan     0.1000 -15765.1418
##    500  3060247.9131             nan     0.1000 -26248.1516

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 211956391.9013             nan     0.0500 14926186.2323
##      2 198873310.1162             nan     0.0500 13225282.1275
##      3 186894311.8157             nan     0.0500 12464204.7417
##      4 175584920.2442             nan     0.0500 10910748.8080
##      5 165077889.5136             nan     0.0500 10758711.7665
##      6 156142605.3874             nan     0.0500 9387090.3166
##      7 147733648.8835             nan     0.0500 8252147.5393
##      8 140102724.0583             nan     0.0500 7378110.8718
##      9 133101485.0488             nan     0.0500 6543501.6303
##     10 126703099.6157             nan     0.0500 6386868.0525
##     20 85402987.6922              nan     0.0500 2749554.7453
##     40 55002878.5822              nan     0.0500 711711.2533
##     60 42596306.9067              nan     0.0500 164016.2553
##     80 36382935.0300              nan     0.0500 146790.6776
##    100 33370248.6047              nan     0.0500 75537.2331
##    120 31491160.2349              nan     0.0500 89835.7877
##    140 30320869.4273              nan     0.0500 29369.8612
##    160 29174253.9889              nan     0.0500 -3949.2233
##    180 28343251.4990              nan     0.0500 -22666.5965
##    200 27329199.2545              nan     0.0500 16715.2622
##    220 26708713.6888              nan     0.0500 -14767.3691
##    240 26106823.9901              nan     0.0500 -28898.4815
##    260 25615639.3079              nan     0.0500 -37650.1888
##    280 25145092.8329              nan     0.0500 -27078.4133
##    300 24719652.4834              nan     0.0500 -28989.6424
##    320 24165490.3097              nan     0.0500 -45569.4087
##    340 23629947.6623              nan     0.0500 -22705.0410
##    360 23158333.7803              nan     0.0500 -41056.9812
##    380 22725702.8967              nan     0.0500 -4954.0966
##    400 22413550.6846              nan     0.0500 -15014.8322
##    420 22101665.7584              nan     0.0500 -1797.6115
##    440 21829172.6800              nan     0.0500 -51637.8231
##    460 21593032.0825              nan     0.0500 -20882.2273
##    480 21247569.9972              nan     0.0500 21021.7240
##    500 20965314.3569              nan     0.0500 -36161.4429
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 209609945.1881             nan     0.0500 17314508.8973
##      2 194571782.2951             nan     0.0500 14507022.2607
##      3 180517920.9310             nan     0.0500 13258825.2750
##      4 168755828.2366             nan     0.0500 12039332.8220
##      5 157723567.4063             nan     0.0500 10544414.6941
##      6 147424233.9922             nan     0.0500 9497020.9214
##      7 138448939.7191             nan     0.0500 8639708.0785
##      8 130161616.6052             nan     0.0500 7847897.3390
##      9 122622059.6146             nan     0.0500 7384340.5260
##     10 115385422.0846             nan     0.0500 6519627.6662
##     20 72457510.5897              nan     0.0500 2650129.7689
##     40 43817573.3685              nan     0.0500 705657.6459
##     60 34324964.5919              nan     0.0500 242397.0720
##     80 30162132.1715              nan     0.0500 3342.1259
##    100 27742232.2247              nan     0.0500 38471.7928
##    120 26093111.7286              nan     0.0500 21291.2743
##    140 24822795.0480              nan     0.0500 -78092.1726
##    160 23912498.5594              nan     0.0500 -628.4914
##    180 23168069.0812              nan     0.0500 -19420.8334
##    200 22475168.5646              nan     0.0500 13293.2452
```

```
##    220 21825174.7030             nan     0.0500 -38040.3305
##    240 21188928.2462             nan     0.0500 -14927.9989
##    260 20448555.3056             nan     0.0500 -23729.9453
##    280 19939702.3334             nan     0.0500 -12388.2762
##    300 19454017.5088             nan     0.0500 -21858.0039
##    320 18950659.0452             nan     0.0500 -38570.0805
##    340 18572609.0625             nan     0.0500 -54623.5815
##    360 18074074.1409             nan     0.0500 -25782.5194
##    380 17675964.7530             nan     0.0500 -15033.2484
##    400 17239697.8012             nan     0.0500  928.2286
##    420 16940771.9435             nan     0.0500 -29882.1653
##    440 16636038.0975             nan     0.0500 -22051.0425
##    460 16222196.8469             nan     0.0500 -12821.8002
##    480 15921767.9544             nan     0.0500 -44127.5510
##    500 15695830.3032             nan     0.0500 -25191.0735

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 209236691.2796             nan     0.0500 16980588.9041
##      2 193408712.6712             nan     0.0500 15214477.8877
##      3 179338010.2742             nan     0.0500 12626405.5300
##      4 166566073.2698             nan     0.0500 13067868.9501
```

```
##      5 155246329.0143             nan     0.0500 11937847.7156
##      6 145038419.5692             nan     0.0500 10620538.0255
##      7 135620574.3549             nan     0.0500 9246842.0731
##      8 127197196.9193             nan     0.0500 7773450.4922
##      9 119347623.0719             nan     0.0500 7166535.2812
##     10 111858053.4145             nan     0.0500 7161202.5960
##     20 66474856.7569             nan     0.0500 2843909.1225
##     40 38682789.1428             nan     0.0500 492866.4667
##     60 30458470.8304             nan     0.0500 17865.7651
##     80 26975850.0978             nan     0.0500 30700.1149
##    100 25011142.4482             nan     0.0500 50310.6302
##    120 23339343.6880             nan     0.0500 4915.5225
##    140 22249819.9285             nan     0.0500 9318.2680
##    160 21196501.4398             nan     0.0500 13011.1681
##    180 20078042.3908             nan     0.0500 -26417.6012
##    200 19275226.5982             nan     0.0500 -41201.6837
##    220 18425125.6323             nan     0.0500 2202.4830
##    240 17841792.7234             nan     0.0500  926.3010
##    260 17123842.2668             nan     0.0500 -45865.3126
##    280 16570914.2329             nan     0.0500 -14297.7401
##    300 15946064.1296             nan     0.0500 -67309.8891
##    320 15413057.4135             nan     0.0500 -54970.2746
##    340 14931644.2187             nan     0.0500 -23322.0761
##    360 14401937.6201             nan     0.0500 -15968.7311
##    380 13919995.6967             nan     0.0500 -27199.0295
##    400 13602055.0591             nan     0.0500 -54657.7531
##    420 13276142.0574             nan     0.0500 -23957.0882
##    440 12989048.0591             nan     0.0500 -9481.5481
##    460 12677893.5687             nan     0.0500 -23498.9989
##    480 12361828.6648             nan     0.0500 -28310.0706
##    500 12082492.5086             nan     0.0500 -17742.7413

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 208199702.2227             nan     0.0500 18734814.2673
##      2 193746840.5153             nan     0.0500 14934914.0098
##      3 179367814.0255             nan     0.0500 13089498.6726
##      4 165713133.0262             nan     0.0500 13491266.0201
##      5 153339629.0134             nan     0.0500 12480988.9889
##      6 142158405.0266             nan     0.0500 10543175.3557
##      7 132408633.1244             nan     0.0500 8920030.5449
##      8 123658966.2666             nan     0.0500 8403940.0591
##      9 115614054.8824             nan     0.0500 8203986.6577
##     10 108244419.9401             nan     0.0500 6805447.3858
##     20 63015923.6102              nan     0.0500 2810384.0832
##     40 34248648.3792              nan     0.0500 551446.3310
##     60 26625585.1355              nan     0.0500 46570.6043
##     80 23463210.4263              nan     0.0500 37714.2580
##    100 21627597.0706              nan     0.0500 -15360.5111
##    120 20176311.7420              nan     0.0500 -6983.9873
##    140 19004348.3218              nan     0.0500 4645.3547
##    160 18028124.6151              nan     0.0500 -27751.5972
##    180 17183926.8975              nan     0.0500 -52420.2491
##    200 16448013.2115              nan     0.0500 -56442.4324
##    220 15752103.4466              nan     0.0500 -8942.0788
##    240 15158878.9245              nan     0.0500 -44400.6832
##    260 14526015.3796              nan     0.0500 -19619.3054
##    280 13937453.3917              nan     0.0500 -25987.6221
##    300 13398350.0627              nan     0.0500 -40845.4840
##    320 12913422.2196              nan     0.0500 -26416.6054
##    340 12350144.3719              nan     0.0500 -42382.3250
##    360 11956957.1334              nan     0.0500 -63854.9572
##    380 11556017.7574              nan     0.0500 -42753.6654
##    400 11159886.4397              nan     0.0500 -47741.9047
##    420 10807044.1883              nan     0.0500 -19330.2156
##    440 10447991.3540              nan     0.0500 -6991.9842
##    460 10193000.5385              nan     0.0500 -30938.4799
##    480  9809569.6564              nan     0.0500 -28955.1653
##    500  9517307.9954              nan     0.0500 -37438.2594

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 208133736.9696             nan     0.0500 17053117.3435
##      2 191804832.4075             nan     0.0500 16734716.1183
##      3 177377240.3733             nan     0.0500 14530463.1442
##      4 164814867.0160             nan     0.0500 12534656.3644
##      5 152549297.9065             nan     0.0500 11558793.2792
##      6 142094205.0803             nan     0.0500 10568175.4998
##      7 131808386.3119             nan     0.0500 9950093.9291
##      8 122515678.1894             nan     0.0500 9330849.4932
##      9 114735571.4915             nan     0.0500 8066306.1779
##     10 107250124.5063             nan     0.0500 7333876.0121
##     20 60116875.8796              nan     0.0500 2842371.1673
##     40 32474332.5664              nan     0.0500 407995.6868
##     60 25182029.2855              nan     0.0500 166308.4835
##     80 21885423.9123              nan     0.0500 16161.1465
##    100 19642404.3370              nan     0.0500 -5791.1558
##    120 17981888.4734              nan     0.0500 -92374.3319
##    140 16874344.5697              nan     0.0500 -74066.9440
##    160 15627361.6590              nan     0.0500 -28045.6467
##    180 14838455.2967              nan     0.0500 -46366.0230
##    200 14090681.6724              nan     0.0500 -6264.8830
##    220 13419047.9153              nan     0.0500 -56996.7174
##    240 12879308.7341              nan     0.0500 -50183.8309
##    260 12231439.1401              nan     0.0500 -14864.0353
##    280 11638499.7137              nan     0.0500 -30026.1476
##    300 11117804.7633              nan     0.0500 -42515.5209
##    320 10605152.7184              nan     0.0500 -30029.4193
##    340 10061266.0524              nan     0.0500 22823.6691
##    360  9755081.1365              nan     0.0500 -26797.0145
##    380  9401826.2082              nan     0.0500 -30984.5990
##    400  9050660.0051              nan     0.0500 -10851.2993
```

```
##    420  8686066.6237             nan     0.0500 -17284.7007
##    440  8418170.4865             nan     0.0500 -26355.2527
##    460  8079671.6099             nan     0.0500 -25169.6146
##    480  7803907.6646             nan     0.0500 -20434.8381
##    500  7539578.6577             nan     0.0500 -5266.3462

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 207976715.8451             nan     0.0500 19048040.0761
##      2 191473318.3624             nan     0.0500 14479217.9091
##      3 176741645.4269             nan     0.0500 14274880.1870
##      4 163502459.9748             nan     0.0500 13813295.1490
##      5 151840873.3746             nan     0.0500 12250146.4875
##      6 141168969.0609             nan     0.0500 10585479.1401
##      7 130779299.9895             nan     0.0500 10170998.5855
##      8 121079949.9727             nan     0.0500 9542995.0068
##      9 112773514.8650             nan     0.0500 8511739.7221
##     10 105322670.5471             nan     0.0500 7632749.9339
##     20 58541395.2940             nan     0.0500 2903150.9063
##     40 30680734.5541             nan     0.0500 525297.3732
##     60 23463972.4972             nan     0.0500 198044.6794
##     80 20034056.6761             nan     0.0500 70429.8460
```

```
##    100 17869453.6748            nan     0.0500 -53047.5815
##    120 16416637.8075            nan     0.0500 -26871.6240
##    140 15248892.8018            nan     0.0500 -52236.6276
##    160 14182615.3744            nan     0.0500 -43452.1166
##    180 13283674.9080            nan     0.0500 -47098.7998
##    200 12538541.8545            nan     0.0500 -48028.8062
##    220 11867918.1549            nan     0.0500 -32125.6062
##    240 11225809.7620            nan     0.0500 -47066.8207
##    260 10712573.7872            nan     0.0500 -35239.6561
##    280 10155370.4577            nan     0.0500 -30648.1744
##    300  9631698.5950            nan     0.0500 -42581.7965
##    320  9167305.1515            nan     0.0500 -9212.4296
##    340  8790355.4347            nan     0.0500 -44011.7916
##    360  8381686.0284            nan     0.0500 -20218.4388
##    380  7993042.1997            nan     0.0500 -25991.2537
##    400  7610271.5721            nan     0.0500 -3390.0494
##    420  7311200.4105            nan     0.0500 -20738.1294
##    440  6998913.5206            nan     0.0500 -24459.7119
##    460  6695565.8440            nan     0.0500 -19785.3956
##    480  6467541.2544            nan     0.0500 -22363.1834
##    500  6243537.7970            nan     0.0500 -14235.9743

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 197746490.5397             nan     0.1000 26992571.6095
##      2 173810106.2839             nan     0.1000 24696309.0247
##      3 154178663.7366             nan     0.1000 19723590.0017
##      4 138278716.6954             nan     0.1000 16128422.6613
##      5 124802874.7284             nan     0.1000 12770866.9198
##      6 113948132.3953             nan     0.1000 11484938.2650
##      7 104065939.0627             nan     0.1000 9707524.6218
##      8 96152791.9243              nan     0.1000 7763528.8740
##      9 89437522.5390              nan     0.1000 6066231.6704
##     10 83808233.5456              nan     0.1000 5615282.9464
##     20 53435211.2596              nan     0.1000 1740505.4777
##     40 36929427.5566              nan     0.1000 402518.3106
##     60 30987903.1661              nan     0.1000 -50926.6752
##     80 28813717.7886              nan     0.1000 -29681.5191
##    100 27115216.1138              nan     0.1000 -49135.7941
##    120 25593718.5133              nan     0.1000 -159310.1780
##    140 24595495.3334              nan     0.1000 -6874.9109
##    160 23629237.5478              nan     0.1000 -29822.6710
##    180 22736001.7016              nan     0.1000 -189599.4278
##    200 22040465.1807              nan     0.1000 19653.8340
##    220 21576102.6732              nan     0.1000 -58169.7638
##    240 21114090.4356              nan     0.1000 -61760.8459
##    260 20558470.8382              nan     0.1000 -13545.6878
##    280 20030688.1046              nan     0.1000 -24658.3755
##    300 19548121.8588              nan     0.1000 -43195.6312
##    320 19077844.9423              nan     0.1000 -64562.8803
##    340 18787152.8403              nan     0.1000 -23270.2832
##    360 18331661.9487              nan     0.1000 -79480.8065
##    380 17971510.0739              nan     0.1000 -33693.1337
##    400 17627106.8165              nan     0.1000 -45971.3169
##    420 17180179.9483              nan     0.1000 -1649.6261
##    440 16914412.2520              nan     0.1000 -29429.6724
##    460 16669871.4278              nan     0.1000 -44471.4649
##    480 16409375.0554              nan     0.1000 -63841.5439
##    500 16201418.8938              nan     0.1000 -141556.6321

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 193294502.2193             nan     0.1000 30641587.9736
##      2 166270430.6380             nan     0.1000 27362813.7076
##      3 145753314.0699             nan     0.1000 20514030.9097
##      4 128485734.1914             nan     0.1000 16962122.3336
##      5 113695687.9004             nan     0.1000 14332886.4062
##      6 102466037.2740             nan     0.1000 11889622.5104
##      7 92776235.0111              nan     0.1000 9632679.5714
##      8 84139293.3049              nan     0.1000 7711221.2066
##      9 76909400.1148              nan     0.1000 7054613.5331
##     10 71007146.0397              nan     0.1000 4941344.1465
##     20 43012855.1535              nan     0.1000 1133581.2272
##     40 29526170.5200              nan     0.1000 202908.2843
##     60 25680649.5667              nan     0.1000 58147.0693
##     80 23746347.3061              nan     0.1000 -3039.0355
##    100 22253153.8481              nan     0.1000 -29989.0726
##    120 20631463.7737              nan     0.1000 -38817.9409
##    140 19381737.8572              nan     0.1000 -82352.2658
##    160 18529396.0600              nan     0.1000 -111892.1717
##    180 17774694.7461              nan     0.1000 -96029.4379
##    200 17040545.0708              nan     0.1000 -80006.2178
##    220 16376221.4307              nan     0.1000 -94268.4529
##    240 15811959.7218              nan     0.1000 -63854.3285
##    260 15221882.2068              nan     0.1000 -50219.7806
##    280 14590080.6838              nan     0.1000 -11800.5340
##    300 14124169.8857              nan     0.1000 -45182.6098
##    320 13585350.1870              nan     0.1000 -38285.8152
##    340 13157565.0848              nan     0.1000 -1384.9998
##    360 12760960.3955              nan     0.1000 -74455.4431
##    380 12340392.7643              nan     0.1000 -23118.7415
##    400 12109831.5717              nan     0.1000 -53223.4917
##    420 11828235.5281              nan     0.1000 -67884.9258
##    440 11606890.5134              nan     0.1000 -35917.4253
##    460 11255890.7767              nan     0.1000 -54988.0526
##    480 10951809.5450              nan     0.1000 -9670.9479
##    500 10617506.1700              nan     0.1000 -19042.5314

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 192858444.9701             nan     0.1000 32243017.6577
##      2 166781460.9904             nan     0.1000 27127717.3816
##      3 144857330.6368             nan     0.1000 22194199.1227
##      4 126604474.7635             nan     0.1000 19232451.0594
##      5 110367060.9470             nan     0.1000 14427779.5091
##      6 98286615.8144             nan     0.1000 12526623.9176
##      7 87782879.4800             nan     0.1000 10076834.7251
##      8 79020746.0517             nan     0.1000 8791167.7207
##      9 72032319.2567             nan     0.1000 6631070.3403
##     10 65897020.8442             nan     0.1000 6420182.1527
##     20 37953312.7309             nan     0.1000 945812.3176
##     40 26263325.0341             nan     0.1000 24105.7160
##     60 22709154.8306             nan     0.1000 -89579.0535
##     80 20361014.0411             nan     0.1000 -7649.1828
##    100 18598104.8100             nan     0.1000 -39947.0971
##    120 17164921.7837             nan     0.1000 -134740.8891
##    140 16213922.0995             nan     0.1000 -54831.3757
##    160 15318961.6788             nan     0.1000 -31826.7170
##    180 14455954.5449             nan     0.1000 -80271.5581
##    200 13708949.2518             nan     0.1000 -42541.7120
##    220 13052372.4304             nan     0.1000 -15340.6240
##    240 12454225.3699             nan     0.1000 -57157.0716
##    260 11838625.9513             nan     0.1000 -40308.3370
##    280 11312641.3254             nan     0.1000 -46825.9065
##    300 10725183.3459             nan     0.1000 -41778.2113
##    320 10303386.7438             nan     0.1000 -30635.0563
##    340  9740175.1539             nan     0.1000 -24774.1651
```

```
##    360  9253089.5424             nan     0.1000 -37902.3152
##    380  8897924.0307             nan     0.1000 -49020.4352
##    400  8554459.5954             nan     0.1000 -67134.5493
##    420  8278888.3884             nan     0.1000 -38476.4141
##    440  7951147.5676             nan     0.1000 -36088.9179
##    460  7642521.6172             nan     0.1000 -22397.8174
##    480  7391061.6053             nan     0.1000 -31775.6564
##    500  7114620.2219             nan     0.1000 -25547.4949

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191516282.5162             nan     0.1000 34322889.5861
##      2 163047495.0052             nan     0.1000 27479242.4409
##      3 139383861.8858             nan     0.1000 22624463.7365
##      4 121327312.3704             nan     0.1000 17506284.4931
##      5 106687880.2709             nan     0.1000 14910863.3248
##      6 94416877.5878             nan     0.1000 11999525.6280
##      7 84948403.5501             nan     0.1000 9477879.3526
##      8 76349938.3755             nan     0.1000 9137117.6603
##      9 68291767.3191             nan     0.1000 6994125.2755
##     10 62112698.4310             nan     0.1000 5514230.7845
##     20 35180045.9438             nan     0.1000 1410149.5589
```

```
##     40 24199381.9698             nan     0.1000 55691.8790
##     60 21055613.1091             nan     0.1000 -171622.5326
##     80 18847426.2325             nan     0.1000 -39062.1912
##    100 16972562.3919             nan     0.1000 -50463.7956
##    120 15529190.3557             nan     0.1000 -102710.4650
##    140 14408823.9774             nan     0.1000 -132925.3331
##    160 13356249.8816             nan     0.1000 -95561.9849
##    180 12463818.4906             nan     0.1000 -85889.0012
##    200 11618703.9995             nan     0.1000 -83620.3902
##    220 10880465.5993             nan     0.1000 -12475.0018
##    240 10309250.2057             nan     0.1000 -137153.7534
##    260  9788328.2776             nan     0.1000 -52691.7510
##    280  9173743.1574             nan     0.1000 -58272.7087
##    300  8667971.8606             nan     0.1000 -28466.7510
##    320  8262546.2312             nan     0.1000 -53549.3342
##    340  7829993.0806             nan     0.1000 -71867.6030
##    360  7436267.2408             nan     0.1000 -33546.2138
##    380  7078654.3888             nan     0.1000 -66498.6586
##    400  6767252.7845             nan     0.1000 -51182.8996
##    420  6441526.2885             nan     0.1000 -15232.6108
##    440  6150096.9801             nan     0.1000 -9571.3713
##    460  5859853.0677             nan     0.1000 -19955.8740
##    480  5588560.2666             nan     0.1000 -14026.1975
##    500  5387389.6181             nan     0.1000 -42519.9329

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 190648586.5463             nan     0.1000 33476099.0608
##      2 161722986.0994             nan     0.1000 27910789.8995
##      3 138932618.5951             nan     0.1000 21698184.0960
##      4 119587958.3883             nan     0.1000 19911835.2687
##      5 104571232.2457             nan     0.1000 14974383.8760
##      6 92136804.4363             nan     0.1000 12175799.6506
##      7 80934367.9642             nan     0.1000 10597812.7464
##      8 72360865.4749             nan     0.1000 7981411.6514
##      9 65096735.6450             nan     0.1000 7215631.4433
##     10 59184870.0585             nan     0.1000 6076620.6709
##     20 33037859.0956             nan     0.1000 1094441.2133
##     40 22285729.7537             nan     0.1000 -42397.4696
##     60 18465458.6696             nan     0.1000 -38513.0918
##     80 16085090.6526             nan     0.1000 -109834.3201
##    100 14398743.5327             nan     0.1000 -38763.6646
##    120 12928818.1004             nan     0.1000 -61161.3021
##    140 11727596.3171             nan     0.1000 -72820.7739
##    160 10818969.9184             nan     0.1000 -96938.6797
##    180  9845347.3227             nan     0.1000 -42085.3007
##    200  8975367.2374             nan     0.1000 -17644.9480
##    220  8356658.0125             nan     0.1000 -122556.2021
##    240  7794207.7266             nan     0.1000 -68968.6823
##    260  7265783.1307             nan     0.1000 -59146.1126
##    280  6808216.4195             nan     0.1000 -57895.8255
##    300  6493506.9149             nan     0.1000 -69500.4517
##    320  6083359.5832             nan     0.1000 -18235.7629
##    340  5702326.5942             nan     0.1000 -21563.0365
##    360  5309367.9402             nan     0.1000 -18038.8572
##    380  4973521.3485             nan     0.1000 -20975.5699
##    400  4652214.0672             nan     0.1000 -34909.5636
##    420  4414684.7056             nan     0.1000 -12434.0325
##    440  4185670.1213             nan     0.1000 -27003.7049
##    460  3997495.4244             nan     0.1000 -23731.0624
##    480  3815359.7258             nan     0.1000 -19328.8334
##    500  3650705.0253             nan     0.1000 -18402.2694

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 13: manufacturerinfiniti has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 113: statewv has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 114: statewy has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191102957.1827             nan     0.1000 36400374.1509
##      2 162556995.7774             nan     0.1000 27808238.5184
##      3 138365156.9675             nan     0.1000 23394102.1161
##      4 118386130.2089             nan     0.1000 18241620.2509
##      5 102837656.8632             nan     0.1000 15854335.9299
##      6 89833469.8851             nan     0.1000 12997030.5094
##      7 79248216.7040             nan     0.1000 10760085.9081
##      8 71016205.1701             nan     0.1000 8673291.7762
##      9 63462393.5401             nan     0.1000 6931524.9335
##     10 57284184.8777             nan     0.1000 5965339.8485
##     20 30748068.0433             nan     0.1000 861363.5278
##     40 20831800.8711             nan     0.1000 -269970.4929
##     60 17034551.7913             nan     0.1000 -42311.9715
##     80 15000129.6196             nan     0.1000 -53921.6099
##    100 13365527.0797             nan     0.1000 -34031.9329
##    120 11915280.4614             nan     0.1000 -66020.8302
##    140 10633129.3455             nan     0.1000 -74689.0969
##    160  9635588.4769             nan     0.1000 -53273.3147
##    180  8719001.2670             nan     0.1000 -108238.9639
##    200  8007106.2380             nan     0.1000 -32512.9673
##    220  7444950.9261             nan     0.1000 -59871.3494
##    240  6821151.7048             nan     0.1000 -49185.7175
##    260  6222196.6427             nan     0.1000 -6493.8556
##    280  5750222.3142             nan     0.1000 -45898.2584
##    300  5377486.3709             nan     0.1000 -51078.5077
##    320  5046944.9535             nan     0.1000 -27736.4659
##    340  4687572.2490             nan     0.1000 -24691.9927
##    360  4365761.8110             nan     0.1000 -28799.8860
##    380  4094186.5676             nan     0.1000 -30734.5643
##    400  3833299.1004             nan     0.1000 -12091.8792
##    420  3628902.4892             nan     0.1000 -42183.5763
##    440  3398879.1640             nan     0.1000 -51443.7034
##    460  3195962.6769             nan     0.1000 -5067.7881
##    480  3021668.0893             nan     0.1000 -26295.3612
##    500  2835137.7466             nan     0.1000 -12220.1315

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 209003672.7857             nan     0.0500 15073738.2040
##      2 195555877.5550             nan     0.0500 12638826.3620
##      3 183169338.9401             nan     0.0500 12504498.5497
##      4 171565956.9761             nan     0.0500 10489141.8815
##      5 161277879.7614             nan     0.0500 10321000.6153
##      6 151799945.1334             nan     0.0500 9705363.6618
##      7 143181638.3950             nan     0.0500 8376996.0487
##      8 135376640.3802             nan     0.0500 7502858.9314
##      9 128401946.3478             nan     0.0500 6844034.0559
##     10 122044266.5794             nan     0.0500 6327477.0943
##     20 82041475.9001              nan     0.0500 2559187.5379
##     40 52383781.9977              nan     0.0500 809354.1916
##     60 40874526.6292              nan     0.0500 331322.3581
##     80 35606796.3285              nan     0.0500 159622.8613
##    100 32216339.4824              nan     0.0500 85050.7185
##    120 30571286.7280              nan     0.0500 -23236.1545
##    140 28961599.7290              nan     0.0500 4859.3636
##    160 27847861.6717              nan     0.0500 10117.8245
##    180 26884449.2519              nan     0.0500 9132.1880
##    200 26126846.5412              nan     0.0500 -50376.9034
##    220 25544112.9795              nan     0.0500 -19412.6378
##    240 24978458.8892              nan     0.0500 27657.6042
##    260 24433199.2855              nan     0.0500 18816.4404
##    280 23852239.7712              nan     0.0500 -35847.7484
##    300 23219563.7361              nan     0.0500 38493.6855
##    320 22868182.1724              nan     0.0500 -27126.7221
##    340 22430817.0115              nan     0.0500 -28291.9528
##    360 21953575.6164              nan     0.0500 -3623.0464
##    380 21469040.9147              nan     0.0500 1599.5210
##    400 21252173.7931              nan     0.0500 -49157.6304
```

```
##    420 20855911.6556             nan     0.0500 -5115.8706
##    440 20524804.8948             nan     0.0500 -44775.4287
##    460 20253791.4685             nan     0.0500 -23004.6731
##    480 19936159.5688             nan     0.0500 -18858.3091
##    500 19727132.2747             nan     0.0500 -47485.2634

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 207241652.1518             nan     0.0500 15865942.0575
##      2 191927016.9735             nan     0.0500 15766082.9982
##      3 178099997.8419             nan     0.0500 13310047.5468
##      4 165643568.4847             nan     0.0500 11111085.3880
##      5 154549417.3343             nan     0.0500 11121812.4216
##      6 144263451.5899             nan     0.0500 9778045.1729
##      7 135448458.9314             nan     0.0500 8803668.0892
##      8 127562103.1097             nan     0.0500 8268789.1433
##      9 120277588.6214             nan     0.0500 6979165.5266
##     10 113557177.7925             nan     0.0500 6976149.2943
##     20 69884008.9079             nan     0.0500 2647483.6276
##     40 41581335.8819             nan     0.0500 718600.9303
##     60 32360480.8528             nan     0.0500 209791.6393
##     80 28406243.1871             nan     0.0500 -75373.3702
##    100 26479151.5112             nan     0.0500 -6054.2045
##    120 24903889.8380             nan     0.0500 -105747.7463
##    140 23685171.5106             nan     0.0500 33549.1471
##    160 22609209.6521             nan     0.0500 -35597.1029
##    180 21656688.0717             nan     0.0500 -78676.2079
##    200 20902335.8285             nan     0.0500 -15396.1058
##    220 20219067.8717             nan     0.0500 4269.1488
```

```
##    240 19525118.5609             nan     0.0500 2362.8257
##    260 18898902.7896             nan     0.0500 -48472.1240
##    280 18405259.5846             nan     0.0500 4016.7819
##    300 18028430.8187             nan     0.0500 -30267.3582
##    320 17536219.0288             nan     0.0500 -39124.5011
##    340 17116329.5265             nan     0.0500 -4984.3170
##    360 16755559.0341             nan     0.0500 -43122.2904
##    380 16410374.3700             nan     0.0500 -17221.5415
##    400 16102993.0647             nan     0.0500 -18441.0712
##    420 15712010.4619             nan     0.0500 -48901.3144
##    440 15392739.8762             nan     0.0500 -13353.4697
##    460 15095400.7747             nan     0.0500 -26077.2248
##    480 14906914.7209             nan     0.0500 -24168.3161
##    500 14630229.0794             nan     0.0500 -24864.6627

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206265692.6878             nan     0.0500 17260319.2776
##      2 190792263.4213             nan     0.0500 15603267.3959
##      3 177216493.3398             nan     0.0500 13912644.8749
##      4 164464173.0029             nan     0.0500 13308099.1045
##      5 152562154.8704             nan     0.0500 10816904.7476
##      6 142111942.7982             nan     0.0500 10794613.6605
##      7 132452174.9953             nan     0.0500 9283867.0753
##      8 123835843.6471             nan     0.0500 7961762.6200
##      9 115943648.5549             nan     0.0500 7655046.2182
##     10 108701122.5823             nan     0.0500 6926245.3823
##     20 64037004.9073             nan     0.0500 2554742.1529
##     40 36589748.5107             nan     0.0500 542013.7700
```

```
##     60 28471737.9793             nan     0.0500 200273.0880
##     80 24885177.9709             nan     0.0500 20037.0806
##    100 22840097.3934             nan     0.0500 14262.1517
##    120 21455832.2064             nan     0.0500 -55806.4675
##    140 20079283.7323             nan     0.0500 33437.7579
##    160 19195490.8286             nan     0.0500 -23501.3442
##    180 18365221.3629             nan     0.0500 -3582.9143
##    200 17626744.1402             nan     0.0500 -47928.9988
##    220 16853584.6127             nan     0.0500 -45294.7769
##    240 16278360.3204             nan     0.0500 -24600.6969
##    260 15670437.2893             nan     0.0500 -11701.2798
##    280 15119373.9932             nan     0.0500 -38838.1116
##    300 14652779.4208             nan     0.0500 -10761.0315
##    320 14316606.5868             nan     0.0500 -32663.7463
##    340 13948839.8746             nan     0.0500 -14922.9392
##    360 13543612.2564             nan     0.0500 -30461.0507
##    380 13212803.8814             nan     0.0500 -31637.6238
##    400 12917001.0886             nan     0.0500 -11590.1748
##    420 12602567.6722             nan     0.0500 -17769.9137
##    440 12308329.9847             nan     0.0500 -16939.9333
##    460 11937110.7388             nan     0.0500 -13761.5461
##    480 11611465.5789             nan     0.0500 -26975.3504
##    500 11365341.3472             nan     0.0500 -29817.3737

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206251742.3665             nan     0.0500 16123878.1459
##      2 189862393.6930             nan     0.0500 16406497.2012
##      3 176297048.5362             nan     0.0500 13230739.1034
```

```
##      4 163111396.1796             nan     0.0500 13617056.3136
##      5 151314965.7239             nan     0.0500 11235801.9868
##      6 140367553.4205             nan     0.0500 10972376.9722
##      7 130561043.1222             nan     0.0500 9662101.2867
##      8 121897036.2827             nan     0.0500 8392113.2250
##      9 114179680.3604             nan     0.0500 7452784.0735
##     10 107025652.6354             nan     0.0500 6589330.4496
##     20 61613078.9006              nan     0.0500 2793361.2351
##     40 33248583.9682              nan     0.0500 375237.1462
##     60 25489463.7345              nan     0.0500 144590.7344
##     80 21983896.8358              nan     0.0500 170593.4589
##    100 20031542.9562              nan     0.0500 -30376.2560
##    120 18271170.8618              nan     0.0500 -32726.5975
##    140 17204405.7493              nan     0.0500 -4508.2530
##    160 16416252.6431              nan     0.0500 -6314.3927
##    180 15664681.5508              nan     0.0500 -87404.8412
##    200 14999216.2094              nan     0.0500 2385.3376
##    220 14345361.2832              nan     0.0500 -15178.8123
##    240 13741895.8411              nan     0.0500 -27734.0038
##    260 13300071.5841              nan     0.0500 -51984.0990
##    280 12659559.2684              nan     0.0500 -30855.7511
##    300 12229023.9529              nan     0.0500 -28824.0487
##    320 11785706.4213              nan     0.0500 -20942.6050
##    340 11404993.9436              nan     0.0500 -8447.3714
##    360 11001217.0338              nan     0.0500 -22150.1797
##    380 10618974.8070              nan     0.0500 -22486.2547
##    400 10208325.8946              nan     0.0500 -11306.7523
##    420  9900000.4058              nan     0.0500 -45356.0863
##    440  9655834.9861              nan     0.0500 -10377.1583
##    460  9362747.7381              nan     0.0500 -15388.7865
##    480  9072493.8810              nan     0.0500 11276.7767
##    500  8786315.0439              nan     0.0500 -16510.0062

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205616773.4502             nan     0.0500 17705553.0125
##      2 189190663.5420             nan     0.0500 16193549.6568
##      3 174262096.5199             nan     0.0500 14913430.7058
##      4 161229256.2166             nan     0.0500 13216377.4555
##      5 149350997.6783             nan     0.0500 12049571.7369
##      6 138677475.1644             nan     0.0500 10671800.7580
##      7 128470248.2945             nan     0.0500 9951750.5710
##      8 119220756.5606             nan     0.0500 8702864.9045
##      9 111198154.7123             nan     0.0500 7403803.5192
##     10 103933706.0566             nan     0.0500 6456402.4203
##     20 58263564.5225             nan     0.0500 2825519.0449
##     40 31320372.5087             nan     0.0500 474917.4390
##     60 23585252.1419             nan     0.0500 171765.6233
##     80 20338441.5067             nan     0.0500 23927.4171
##    100 18612875.0857             nan     0.0500 -18337.6333
##    120 17284873.0477             nan     0.0500 -11606.1891
##    140 16156478.6557             nan     0.0500 -18559.8699
##    160 15148753.8732             nan     0.0500 -41731.8493
##    180 14314874.9401             nan     0.0500 -74115.4114
##    200 13582718.6693             nan     0.0500 -64701.3656
##    220 12864208.8031             nan     0.0500 -52852.0672
##    240 12251274.3570             nan     0.0500 -44388.7471
##    260 11678578.0335             nan     0.0500 -15090.1339
##    280 11184076.9411             nan     0.0500 -605.2769
##    300 10698888.8520             nan     0.0500 -33564.4369
##    320 10291900.3138             nan     0.0500 -42337.0539
##    340  9892771.5753             nan     0.0500 -27476.1746
##    360  9483759.0357             nan     0.0500 -26821.4297
##    380  9169804.6345             nan     0.0500 -65434.1810
##    400  8879464.2844             nan     0.0500 -26765.7188
##    420  8553304.2966             nan     0.0500 -13113.0222
##    440  8188478.2860             nan     0.0500 -20716.4448
##    460  7862355.9588             nan     0.0500 -13721.8857
##    480  7619331.4993             nan     0.0500 -5808.1815
##    500  7366724.6670             nan     0.0500  237.7652

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205184682.2618             nan     0.0500 18077228.7207
##      2 188287440.3316             nan     0.0500 16253638.2127
##      3 174571975.2121             nan     0.0500 13916746.5255
##      4 161634959.9694             nan     0.0500 13067556.6186
##      5 149178894.1041             nan     0.0500 12580556.5725
##      6 137953549.9222             nan     0.0500 11186489.3321
##      7 127866764.1500             nan     0.0500 9634719.2834
##      8 118014651.0488             nan     0.0500 9346956.6354
##      9 109654542.6928             nan     0.0500 7776963.2002
##     10 102149823.5410             nan     0.0500 7400902.5479
##     20 56366515.8093             nan     0.0500 2759513.6025
##     40 28957175.7108             nan     0.0500 343044.8915
##     60 21934426.8948             nan     0.0500 68393.0468
##     80 18657542.2091             nan     0.0500 -80000.7767
##    100 16765382.2190             nan     0.0500 -13506.4087
##    120 15573138.0264             nan     0.0500 -47942.5126
##    140 14220808.8905             nan     0.0500 -47651.0386
##    160 13451865.1163             nan     0.0500 -56382.3546
##    180 12694861.6044             nan     0.0500 -36106.0579
##    200 11933840.1268             nan     0.0500 -4453.0375
##    220 11229741.0736             nan     0.0500 -20140.9805
##    240 10665233.5798             nan     0.0500 -49393.6221
##    260 10107125.4895             nan     0.0500 -51158.3680
##    280  9663854.1728             nan     0.0500 -17852.4003
##    300  9152444.0976             nan     0.0500 -9323.3169
##    320  8707180.8546             nan     0.0500 -58277.6705
##    340  8372288.5039             nan     0.0500 -27243.4350
##    360  8010866.7281             nan     0.0500 -21987.6817
##    380  7607073.6177             nan     0.0500 -13220.5302
##    400  7280242.2303             nan     0.0500 -35100.7897
##    420  6975651.0416             nan     0.0500 -33602.0026
##    440  6709731.3465             nan     0.0500 -6262.3315
##    460  6422108.8129             nan     0.0500 -16164.9519
##    480  6169707.8875             nan     0.0500 -10171.2736
##    500  5961834.6229             nan     0.0500 -37321.2964

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 194875931.5981             nan     0.1000 27497216.1384
##      2 171874342.8675             nan     0.1000 24532512.3556
##      3 152669320.4288             nan     0.1000 19735811.8167
##      4 136426921.0573             nan     0.1000 15676347.6471
##      5 122737910.2280             nan     0.1000 14110253.7056
##      6 111455998.3378             nan     0.1000 11016627.6946
##      7 101478144.6503             nan     0.1000 9533314.4596
##      8 93665706.5128             nan     0.1000 7868319.3594
##      9 86757122.3943             nan     0.1000 7059643.7493
##     10 81069319.8846             nan     0.1000 5182431.3901
##     20 51428516.8192             nan     0.1000 1579030.0351
##     40 34792638.6546             nan     0.1000 316943.7424
##     60 29827823.6850             nan     0.1000 -231328.7233
##     80 27405472.0223             nan     0.1000 -23106.0231
##    100 25780344.9703             nan     0.1000 -86426.3333
##    120 24383455.9034             nan     0.1000 -67972.5622
##    140 23436770.6517             nan     0.1000 -63719.3552
##    160 22596794.8986             nan     0.1000 -66108.5394
##    180 21961294.5119             nan     0.1000 -36654.4395
##    200 21025826.8034             nan     0.1000 -9559.3145
##    220 20310704.1516             nan     0.1000 -11116.5168
##    240 19919767.4608             nan     0.1000 -58803.2550
##    260 19517725.8810             nan     0.1000 -50363.1958
##    280 18922555.7206             nan     0.1000 -47542.0502
##    300 18392703.9078             nan     0.1000 -78029.5908
##    320 18048984.4185             nan     0.1000 -68163.3169
##    340 17671893.8814             nan     0.1000 -93817.0508
##    360 17264247.4676             nan     0.1000 -33450.3363
##    380 16921513.4373             nan     0.1000 -124202.4542
##    400 16579180.9007             nan     0.1000 -38121.6505
##    420 16246727.3613             nan     0.1000 -20610.0761
##    440 15896626.5066             nan     0.1000 -63074.4008
##    460 15553813.9084             nan     0.1000 -38920.5762
##    480 15319890.3211             nan     0.1000 -45210.7896
##    500 15129302.0625             nan     0.1000 -44493.6977

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 190500168.5033             nan     0.1000 30631904.7234
##      2 164238666.9011             nan     0.1000 26171564.0453
##      3 142925702.0646             nan     0.1000 21461954.3578
##      4 126277124.5408             nan     0.1000 17264094.7781
##      5 112217941.0367             nan     0.1000 14464532.1004
##      6 99967696.7513             nan     0.1000 11310312.5821
##      7 89910715.0210             nan     0.1000 9110685.4772
##      8 81486025.3356             nan     0.1000 8203842.8081
##      9 74827736.0338             nan     0.1000 6584748.6854
##     10 69283445.8469             nan     0.1000 5611830.2330
##     20 41800270.1149             nan     0.1000 1390563.2913
##     40 28281706.1565             nan     0.1000 -53384.0117
##     60 24514835.1851             nan     0.1000 -94684.2351
##     80 22147602.3806             nan     0.1000 -55277.4425
##    100 20874376.2896             nan     0.1000 -100008.9295
##    120 19739945.0353             nan     0.1000 -26185.5590
##    140 18630928.9436             nan     0.1000 -174159.6465
##    160 17805557.5713             nan     0.1000 -83044.3884
##    180 17060740.2698             nan     0.1000 -72890.7340
##    200 16478543.5764             nan     0.1000 -56602.8730
##    220 15852866.1953             nan     0.1000 -88952.5086
##    240 15291689.5109             nan     0.1000 -63767.2767
##    260 14836038.1899             nan     0.1000 -8842.0863
##    280 14334005.9066             nan     0.1000 -43392.3802
##    300 13834187.7342             nan     0.1000 -45639.2275
##    320 13382823.5534             nan     0.1000 -43703.1855
##    340 12959892.5974             nan     0.1000 -37497.6780
##    360 12492401.5531             nan     0.1000 -65915.6918
##    380 12083889.7906             nan     0.1000 -17448.0795
##    400 11751884.3626             nan     0.1000 2848.9124
```

```
##    420 11489344.9774             nan     0.1000 -65864.3534
##    440 11131113.8558             nan     0.1000 -24117.8690
##    460 10867469.1775             nan     0.1000 -29471.4188
##    480 10583225.1136             nan     0.1000 -30587.7444
##    500 10261638.6102             nan     0.1000 6435.4320

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 189531644.9200             nan     0.1000 34478345.8201
##      2 162260887.0905             nan     0.1000 27147766.1320
##      3 139907192.8550             nan     0.1000 23264324.1838
##      4 121605438.2595             nan     0.1000 18517742.9010
##      5 106686074.6501             nan     0.1000 14720119.3530
##      6 94771784.8021             nan     0.1000 12251098.3921
##      7 84568530.7025             nan     0.1000 9857010.2096
##      8 76728865.9844             nan     0.1000 8242391.1566
##      9 69888514.1360             nan     0.1000 6267307.2215
##     10 63822364.0198             nan     0.1000 5380078.5021
##     20 37204364.9623             nan     0.1000 1809204.6207
##     40 24585697.1494             nan     0.1000 -43611.9929
##     60 21000174.5736             nan     0.1000 57297.0531
##     80 18767644.0745             nan     0.1000 -87684.2965
##    100 17235724.2069             nan     0.1000 -11522.1514
##    120 15662523.5838             nan     0.1000 -40232.1897
##    140 14623255.5476             nan     0.1000 -71692.0556
##    160 13916828.2601             nan     0.1000 -30807.9996
##    180 13226422.7935             nan     0.1000 -47141.4222
##    200 12660310.1387             nan     0.1000 -58842.5826
##    220 12021606.8508             nan     0.1000 -106742.6014
```

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##    240 11348405.7385             nan     0.1000 -7731.8065
##    260 10824423.4334             nan     0.1000 -59871.8135
##    280 10384098.6114             nan     0.1000 -21224.5181
##    300  9783564.3366             nan     0.1000 -47102.7891
##    320  9371146.2725             nan     0.1000 -53779.9303
##    340  8947249.4762             nan     0.1000 -12824.1825
##    360  8652751.8135             nan     0.1000 -59265.3879
##    380  8375494.5593             nan     0.1000 -44269.6853
##    400  8133423.8356             nan     0.1000 -85841.6517
##    420  7848005.6814             nan     0.1000 -52171.9012
##    440  7594365.7496             nan     0.1000 -35539.3798
##    460  7334682.6497             nan     0.1000 -21027.3839
##    480  7149008.5533             nan     0.1000 -39985.9027
##    500  6854358.3596             nan     0.1000 -40064.3570

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188774227.6468             nan     0.1000 32252026.4973
##      2 161031959.3060             nan     0.1000 27885579.5908
##      3 138423674.7256             nan     0.1000 22776693.6638
##      4 119865523.1392             nan     0.1000 19373935.5720
##      5 104829631.2227             nan     0.1000 14125311.6020
##      6 92085568.6620             nan     0.1000 12648927.0369
##      7 81991950.8502             nan     0.1000 10508902.9414
##      8 73539227.2403             nan     0.1000 7791549.6866
##      9 66162351.1201             nan     0.1000 7146521.8900
##     10 60278831.5432             nan     0.1000 5795678.8326
##     20 33343960.3865             nan     0.1000 578589.0479
##     40 22276414.9048             nan     0.1000 44562.4387
```

```
##     60 18918616.4319             nan     0.1000 10952.8762
##     80 16857191.5972             nan     0.1000 56517.5671
##    100 15556684.1971             nan     0.1000 -50451.6343
##    120 14026370.0138             nan     0.1000 -17294.5382
##    140 13135088.7246             nan     0.1000 -132970.5014
##    160 12163973.0948             nan     0.1000 -119436.6890
##    180 11537916.9905             nan     0.1000 -61546.0185
##    200 10813098.5919             nan     0.1000 -30407.1392
##    220 10223335.7333             nan     0.1000 -34220.0194
##    240  9516948.4661             nan     0.1000 -5106.2701
##    260  8979313.6857             nan     0.1000 -24167.8512
##    280  8540456.8165             nan     0.1000 -10897.8601
##    300  8097271.3318             nan     0.1000 -48455.9262
##    320  7732287.8570             nan     0.1000 -60853.1798
##    340  7358707.4417             nan     0.1000 -34019.8371
##    360  6966386.0548             nan     0.1000 -31923.6511
##    380  6625174.2933             nan     0.1000 -27342.7250
##    400  6305372.5301             nan     0.1000 -70017.1567
##    420  6021543.4813             nan     0.1000 -66904.2229
##    440  5787518.6847             nan     0.1000 -32912.9152
##    460  5535673.8356             nan     0.1000 -40488.7934
##    480  5322331.9223             nan     0.1000 -32316.0199
##    500  5122356.1975             nan     0.1000 -48715.6866

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188449091.7509             nan     0.1000 34362161.1536
##      2 159789317.9062             nan     0.1000 28894719.7932
##      3 136833088.5599             nan     0.1000 21959127.6575
```

```
##      4 117792133.1310             nan     0.1000 19459241.8720
##      5 103069929.9469             nan     0.1000 14960158.4792
##      6 90190680.0764              nan     0.1000 12632883.0288
##      7 79089499.8410              nan     0.1000 9826812.8796
##      8 70227872.4361              nan     0.1000 8176023.2135
##      9 62977557.0439              nan     0.1000 6470814.1814
##     10 56991895.8879              nan     0.1000 4805045.6774
##     20 30703168.5397              nan     0.1000 996576.1308
##     40 20996720.2689              nan     0.1000 20643.0009
##     60 17303744.7056              nan     0.1000 -100179.0314
##     80 14973144.1606              nan     0.1000 6396.4953
##    100 13507602.6476              nan     0.1000 -76219.6571
##    120 12159808.5550              nan     0.1000 12409.8180
##    140 11144828.0754              nan     0.1000 -93400.8456
##    160 10290088.0179              nan     0.1000 -27224.2661
##    180  9323265.2746              nan     0.1000 -77099.0204
##    200  8709564.7260              nan     0.1000 -25045.5406
##    220  7941981.9936              nan     0.1000 -14628.2738
##    240  7367574.9106              nan     0.1000 -42627.6131
##    260  6928274.9119              nan     0.1000 -39504.6870
##    280  6493175.3414              nan     0.1000 -27806.3051
##    300  6109598.6716              nan     0.1000 -40036.0621
##    320  5736291.5081              nan     0.1000 -46761.4400
##    340  5454449.4457              nan     0.1000 -29759.9289
##    360  5110454.9225              nan     0.1000 -29488.2930
##    380  4721597.1637              nan     0.1000 -30205.1277
##    400  4499831.0237              nan     0.1000 -25347.4945
##    420  4272124.0255              nan     0.1000 -46898.9202
##    440  4070461.3581              nan     0.1000 -41830.4225
##    460  3891223.9284              nan     0.1000 -21121.0352
##    480  3681624.5564              nan     0.1000 -11963.9454
##    500  3487449.7631              nan     0.1000 -10146.2943

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 93: statene has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 189157301.4917             nan     0.1000 35421818.0684
##      2 160396949.4994             nan     0.1000 29017646.3404
##      3 136906390.1825             nan     0.1000 22212486.1149
##      4 117291703.6685             nan     0.1000 17510461.5842
##      5 100656975.4204             nan     0.1000 16087997.4970
##      6 88003983.1022             nan     0.1000 12116564.1444
##      7 77050753.4829             nan     0.1000 10410621.7744
##      8 68268156.3891             nan     0.1000 8326939.5059
##      9 60853570.5960             nan     0.1000 6790695.1725
##     10 55007929.5263             nan     0.1000 5549818.6705
##     20 28157443.1647             nan     0.1000 811576.6736
##     40 18392426.2402             nan     0.1000 -42359.5673
##     60 15284718.8281             nan     0.1000 -63817.8315
##     80 13097478.1699             nan     0.1000 -52693.2117
##    100 11608209.2807             nan     0.1000 -112061.2720
##    120 10491929.3375             nan     0.1000 -3797.6160
##    140  9564710.3258             nan     0.1000 -124446.2729
##    160  8593625.7782             nan     0.1000 -78022.4702
##    180  7921626.9326             nan     0.1000 -29728.1284
##    200  7260054.6809             nan     0.1000 -54159.6268
##    220  6697688.6098             nan     0.1000 -39022.8818
##    240  6233230.9239             nan     0.1000 -51669.9161
##    260  5707837.6481             nan     0.1000 -64082.3253
##    280  5385121.0062             nan     0.1000 -33432.4316
##    300  5053668.9769             nan     0.1000 -5269.3732
##    320  4663869.1619             nan     0.1000 -37747.0262
##    340  4371545.7702             nan     0.1000 -37177.7730
##    360  4124179.1883             nan     0.1000 -15857.4233
##    380  3879570.6759             nan     0.1000 -21509.6379
##    400  3647520.0487             nan     0.1000 -30217.5214
##    420  3432772.4059             nan     0.1000 -26472.9958
##    440  3261590.9360             nan     0.1000 -24398.9720
##    460  3109989.0000             nan     0.1000 -21406.3598
##    480  2946223.1633             nan     0.1000 -32902.7987
##    500  2768376.0294             nan     0.1000 -29834.1558

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 209358811.7822             nan     0.0500 14901845.3403
##      2 196151616.3048             nan     0.0500 12902016.7900
##      3 184216954.8192             nan     0.0500 12209232.6562
##      4 173092074.6388             nan     0.0500 11039209.2069
##      5 163038235.0263             nan     0.0500 9960605.6853
##      6 153832079.7357             nan     0.0500 9153606.9188
##      7 145879398.4328             nan     0.0500 8199283.3669
##      8 138477414.2081             nan     0.0500 7585100.3446
##      9 131624210.7919             nan     0.0500 7205456.3679
##     10 125555470.4401             nan     0.0500 6178487.2405
##     20 85161522.2129              nan     0.0500 2662977.5624
##     40 54363367.3700              nan     0.0500 849190.0616
##     60 42162744.5019              nan     0.0500 313371.8531
##     80 36010001.2499              nan     0.0500 170753.0536
##    100 32463871.6412              nan     0.0500 -54431.3580
##    120 30560368.4258              nan     0.0500 10548.2175
##    140 29192335.7162              nan     0.0500 64396.1390
##    160 28279288.5984              nan     0.0500 -42727.5695
##    180 27491641.1887              nan     0.0500 -6684.3534
##    200 26770724.2828              nan     0.0500 8522.9465
##    220 26207327.8758              nan     0.0500 1179.9215
##    240 25750734.0783              nan     0.0500 -32085.5919
##    260 25257508.1847              nan     0.0500 -28242.9537
##    280 24780631.6117              nan     0.0500   88.9705
##    300 24313598.5447              nan     0.0500 -17332.8293
##    320 23762296.1846              nan     0.0500 -17528.2525
##    340 23294006.8561              nan     0.0500 -28579.5302
##    360 22937198.4909              nan     0.0500 -53093.2500
##    380 22621955.3823              nan     0.0500 -11397.3056
##    400 22360518.3493              nan     0.0500 -3298.2049
##    420 22030029.3777              nan     0.0500 -29776.9507
##    440 21759982.5101              nan     0.0500 -1143.9546
##    460 21487443.7140              nan     0.0500 -44253.2825
##    480 21256496.8703              nan     0.0500 -48107.5055
##    500 20996626.0905              nan     0.0500 -28108.7707

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 207938340.3799             nan     0.0500 16341416.6899
##      2 193512665.2305             nan     0.0500 14496656.4978
##      3 180112705.7007             nan     0.0500 12607908.5202
##      4 168547704.7058             nan     0.0500 11921460.4422
##      5 157493345.9051             nan     0.0500 10076698.0057
##      6 147549285.3121             nan     0.0500 9827804.3440
##      7 138461586.7118             nan     0.0500 8749139.4993
##      8 130160055.5444             nan     0.0500 8103416.4812
##      9 122869502.9946             nan     0.0500 7182341.4863
##     10 116144405.0406             nan     0.0500 6547123.0152
##     20 72751559.5122             nan     0.0500 2840847.5800
##     40 43678114.9346             nan     0.0500 576863.6430
##     60 34160031.1926             nan     0.0500 229073.1996
##     80 29814888.6726             nan     0.0500 16555.4323
##    100 27398279.6475             nan     0.0500 -13394.0334
##    120 25704396.6579             nan     0.0500 -38231.3530
##    140 24473508.1383             nan     0.0500 20955.5905
##    160 23729541.3494             nan     0.0500 -46755.0828
##    180 22927508.7440             nan     0.0500 -17941.7009
##    200 22196718.6255             nan     0.0500 -44742.0658
##    220 21497061.5938             nan     0.0500 -56094.7175
##    240 20855313.2015             nan     0.0500 -4253.2872
##    260 20380499.9278             nan     0.0500 -41728.9332
##    280 19919246.8599             nan     0.0500 -39762.2394
##    300 19503579.9863             nan     0.0500 12583.0531
##    320 18977222.1471             nan     0.0500 -31320.6853
##    340 18494746.7268             nan     0.0500 -49199.7529
##    360 18191149.6347             nan     0.0500 -45855.4273
##    380 17803323.9148             nan     0.0500 -15271.9108
##    400 17453166.2507             nan     0.0500 -2132.0865
##    420 17038402.0179             nan     0.0500 -11280.0152
##    440 16700358.8969             nan     0.0500 3528.3593
##    460 16336727.6408             nan     0.0500 -34520.3738
##    480 16093563.2463             nan     0.0500 -40804.0899
##    500 15762092.6580             nan     0.0500 -28718.4181

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 207276890.1336             nan     0.0500 16860902.3573
##      2 191420765.0630             nan     0.0500 13713996.1618
##      3 177357177.2730             nan     0.0500 13697609.8530
##      4 164639345.3055             nan     0.0500 12933493.4977
##      5 153007929.1992             nan     0.0500 11544626.8820
##      6 143049811.9129             nan     0.0500 9812902.8341
##      7 133743184.2250             nan     0.0500 9449781.5941
##      8 124890223.1857             nan     0.0500 8401923.6473
##      9 117225637.8327             nan     0.0500 7798064.8811
##     10 110317787.1080             nan     0.0500 6695629.1886
##     20 66541602.4629              nan     0.0500 2858980.0321
##     40 38526656.0247              nan     0.0500 352797.4126
##     60 30041968.1171              nan     0.0500 168779.2398
##     80 26122007.5654              nan     0.0500 -41029.8763
##    100 23858007.6386              nan     0.0500 31426.7969
##    120 22097926.9208              nan     0.0500 -32869.9970
##    140 21019255.9267              nan     0.0500 -25953.7628
##    160 20082642.5274              nan     0.0500 2300.3271
##    180 19222071.8303              nan     0.0500 -41306.3906
##    200 18368594.7627              nan     0.0500 20361.1842
##    220 17682532.8951              nan     0.0500 4154.6241
##    240 17114351.0585              nan     0.0500 -34804.4716
##    260 16721089.7477              nan     0.0500 -37026.4689
##    280 16153743.2228              nan     0.0500 -43468.7412
##    300 15643798.0872              nan     0.0500 -28926.2870
##    320 15187965.4880              nan     0.0500 -28180.6243
##    340 14765384.0950              nan     0.0500 -8326.3619
##    360 14368325.9246              nan     0.0500 1132.2641
##    380 14031094.2130              nan     0.0500 -33393.2816
##    400 13709651.8933              nan     0.0500 -44857.0745
```

```
##    420 13406121.2942             nan     0.0500 -29136.0449
##    440 13013237.1488             nan     0.0500 -9957.4036
##    460 12699702.9834             nan     0.0500 -42646.6185
##    480 12382089.1980             nan     0.0500 -33886.6716
##    500 12045893.3640             nan     0.0500 -52427.3765

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 207461668.4413             nan     0.0500 16961146.9456
##      2 192411408.8238             nan     0.0500 15249954.2253
##      3 178506487.9883             nan     0.0500 13356718.1199
##      4 165164642.4260             nan     0.0500 12263324.0753
##      5 153482512.4050             nan     0.0500 11705629.1456
##      6 142698363.6378             nan     0.0500 11033210.7658
##      7 132854741.5193             nan     0.0500 9980259.2321
##      8 123756578.1758             nan     0.0500 8838151.6712
##      9 115646165.7897             nan     0.0500 8245327.6257
##     10 108366739.6826             nan     0.0500 7182142.8571
##     20 62104265.8279             nan     0.0500 2621368.5919
##     40 34870591.9839             nan     0.0500 533371.8158
##     60 27461332.2814             nan     0.0500 201060.2916
##     80 23842018.9403             nan     0.0500 21466.6414
##    100 21718451.9058             nan     0.0500 -15812.2184
##    120 20098146.4110             nan     0.0500 -33522.7339
##    140 18688044.0397             nan     0.0500 -38648.3687
##    160 17547020.1536             nan     0.0500 -4029.6305
##    180 16563429.1253             nan     0.0500 -33186.4891
##    200 15705086.9144             nan     0.0500 -54035.3922
##    220 14950903.6751             nan     0.0500 18261.0171
```

```
##    240 14406915.8538             nan     0.0500 -45555.9204
##    260 13870612.7532             nan     0.0500 -21632.0500
##    280 13386162.4058             nan     0.0500 -28746.2735
##    300 13018383.6374             nan     0.0500 -35612.9503
##    320 12598825.7832             nan     0.0500 -26244.2015
##    340 12168555.8455             nan     0.0500 7954.3730
##    360 11811616.3184             nan     0.0500 -20373.4712
##    380 11418075.8786             nan     0.0500 -38085.2580
##    400 11082109.1216             nan     0.0500 -9468.3382
##    420 10781501.8144             nan     0.0500 -22407.2484
##    440 10485611.6682             nan     0.0500 -27346.5814
##    460 10167688.2911             nan     0.0500 -35817.4281
##    480  9843441.0031             nan     0.0500 -23013.1826
##    500  9556038.8184             nan     0.0500 -36935.6620

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206090090.6096             nan     0.0500 17404115.0181
##      2 189928169.6847             nan     0.0500 14466605.4684
##      3 175344262.9321             nan     0.0500 13518338.4697
##      4 162070685.4655             nan     0.0500 13631092.0194
##      5 150444188.9385             nan     0.0500 11122364.7841
##      6 139592255.4468             nan     0.0500 10706623.6766
##      7 129460888.9819             nan     0.0500 9854070.5153
##      8 120555012.0481             nan     0.0500 8912010.9205
##      9 112631509.3613             nan     0.0500 7704454.6653
##     10 105078323.5706             nan     0.0500 7193241.3441
##     20 60512141.6453              nan     0.0500 2882504.2429
##     40 32759410.1625              nan     0.0500 515781.8523
```

```
##     60 25052182.4675             nan     0.0500 136035.9462
##     80 21622540.4321             nan     0.0500 11481.8469
##    100 19595549.6398             nan     0.0500 -49443.7044
##    120 18083676.2490             nan     0.0500 -22475.6577
##    140 16913284.8528             nan     0.0500 -67566.1234
##    160 15864956.7777             nan     0.0500 -33399.1897
##    180 15001548.9491             nan     0.0500 -55779.9265
##    200 14178766.8102             nan     0.0500 -17866.6557
##    220 13572690.0168             nan     0.0500 -55281.8555
##    240 12990099.2549             nan     0.0500 -55196.8363
##    260 12354317.2654             nan     0.0500 -13280.0960
##    280 11809533.6476             nan     0.0500 -36475.2921
##    300 11260798.2140             nan     0.0500 -27143.8144
##    320 10873492.9973             nan     0.0500 -28632.3803
##    340 10432078.6719             nan     0.0500 -34798.5424
##    360 10048757.4412             nan     0.0500 -40399.1200
##    380  9634329.2864             nan     0.0500 -17155.2202
##    400  9275983.9597             nan     0.0500 -37932.0403
##    420  8921233.0519             nan     0.0500 -29969.8782
##    440  8628806.3713             nan     0.0500 -15766.9074
##    460  8295204.8445             nan     0.0500 -31401.7715
##    480  8040074.2510             nan     0.0500 -12280.4253
##    500  7771344.6995             nan     0.0500 -29345.0052

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206914984.9727             nan     0.0500 18086403.2979
##      2 190976640.4514             nan     0.0500 15227891.5070
##      3 175951618.3469             nan     0.0500 14115911.4470
```

```
##      4 162766788.2330             nan     0.0500 12898514.9015
##      5 150737906.9652             nan     0.0500 12424314.1489
##      6 139998113.8543             nan     0.0500 10431073.5706
##      7 129954956.7390             nan     0.0500 9364349.5064
##      8 120703518.6503             nan     0.0500 8781918.5900
##      9 112970070.0444             nan     0.0500 8022322.5929
##     10 105571350.8016             nan     0.0500 6507889.0114
##     20 58979803.4837              nan     0.0500 2679898.6683
##     40 30883070.0756              nan     0.0500 512711.4957
##     60 23504773.3836              nan     0.0500 95074.0527
##     80 20173956.2853              nan     0.0500 -41369.0541
##    100 18056981.9247              nan     0.0500 -14157.0309
##    120 16579987.3982              nan     0.0500 -51376.9058
##    140 15427118.0393              nan     0.0500 20065.9866
##    160 14470005.5255              nan     0.0500 -14942.3693
##    180 13598089.6063              nan     0.0500 -11405.7592
##    200 12876871.7878              nan     0.0500 -45714.3700
##    220 12162720.4749              nan     0.0500 -49054.8867
##    240 11406902.0769              nan     0.0500 -18077.0155
##    260 10850188.3217              nan     0.0500 -57244.7056
##    280 10318166.3887              nan     0.0500 -42617.1841
##    300  9843733.7188              nan     0.0500 -9416.2028
##    320  9441979.1510              nan     0.0500 -21887.8341
##    340  9039593.4497              nan     0.0500 -33667.0633
##    360  8686676.6359              nan     0.0500 -61234.0806
##    380  8330567.1196              nan     0.0500 -12608.1386
##    400  8003908.9582              nan     0.0500 -23415.2405
##    420  7740472.7158              nan     0.0500 -19947.3092
##    440  7440860.4133              nan     0.0500 -32869.5984
##    460  7138216.0447              nan     0.0500 -20175.4047
##    480  6874144.2299              nan     0.0500 -27283.1566
##    500  6593419.4512              nan     0.0500 -15521.0294

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 195521901.3249             nan     0.1000 29417097.0373
##      2 171764898.3484             nan     0.1000 20722739.7613
##      3 152122567.8817             nan     0.1000 19603181.1522
##      4 136773475.5486             nan     0.1000 15850626.4381
##      5 124367176.8441             nan     0.1000 13104977.5287
##      6 113772814.6225             nan     0.1000 10338835.9883
##      7 104556430.4577             nan     0.1000 9103733.7649
##      8 96695011.6974             nan     0.1000 7982223.2587
##      9 90519341.8102             nan     0.1000 5511684.8549
##     10 85060463.2338             nan     0.1000 5444946.1402
##     20 54055176.2215             nan     0.1000 1925367.2353
##     40 35894905.1237             nan     0.1000 280157.6638
##     60 30685714.1373             nan     0.1000 1499.7161
##     80 27980504.6459             nan     0.1000 -69799.7820
##    100 26468326.2958             nan     0.1000 -32897.5754
##    120 25493581.4030             nan     0.1000 -89864.6608
##    140 24444781.6794             nan     0.1000 -33022.0957
##    160 23665084.4309             nan     0.1000 -167760.2811
##    180 23042932.0348             nan     0.1000 -17822.6178
##    200 22310592.5711             nan     0.1000 -90892.2366
##    220 21737658.8538             nan     0.1000 -23863.7560
##    240 20985961.1135             nan     0.1000 -50394.0440
##    260 20463298.1829             nan     0.1000 -43767.4393
##    280 20036379.9297             nan     0.1000 31114.8098
##    300 19666810.7862             nan     0.1000 -46858.4569
##    320 19180229.7470             nan     0.1000 -62797.9385
##    340 18827776.8742             nan     0.1000 -26778.1071
##    360 18465694.4310             nan     0.1000 -37077.0476
##    380 18143427.4748             nan     0.1000 -19952.0440
##    400 17858188.2872             nan     0.1000 -48927.7271
##    420 17513795.0457             nan     0.1000 -11451.8989
##    440 17126486.2562             nan     0.1000 -75495.7958
##    460 16799771.3662             nan     0.1000 -47604.4968
##    480 16446197.0925             nan     0.1000 -36676.1816
##    500 16199117.4558             nan     0.1000 -28492.3615

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191841555.0645             nan     0.1000 30956569.4065
##      2 166720619.8086             nan     0.1000 26103677.5299
##      3 145979514.1534             nan     0.1000 20378322.9715
##      4 128534992.4434             nan     0.1000 17102629.3328
##      5 114802727.2854             nan     0.1000 13988057.3570
##      6 102515586.7661             nan     0.1000 12576168.9572
##      7 93356398.8940             nan     0.1000 9883437.8876
##      8 85376014.4279             nan     0.1000 7970179.8972
##      9 78485161.0657             nan     0.1000 6810135.2624
##     10 72400298.0172             nan     0.1000 5538644.5324
##     20 44236520.8784             nan     0.1000 1091258.9657
##     40 29508912.5717             nan     0.1000 220556.6366
##     60 25508411.9846             nan     0.1000 -21758.1235
##     80 23583466.5303             nan     0.1000  487.5182
##    100 21694357.4936             nan     0.1000 12265.1027
##    120 20728431.5394             nan     0.1000 -42381.1107
##    140 19795390.0293             nan     0.1000 -64460.4635
##    160 19035589.5652             nan     0.1000 -106885.3109
##    180 18278379.1044             nan     0.1000 -30227.0411
##    200 17681965.3771             nan     0.1000 -122982.7375
##    220 17020950.5279             nan     0.1000 -5826.0308
##    240 16512823.3887             nan     0.1000 -25645.1477
##    260 16030653.3466             nan     0.1000 -71002.1395
##    280 15492296.5661             nan     0.1000 -46555.2459
##    300 14881779.9921             nan     0.1000 -82482.6455
##    320 14504225.0156             nan     0.1000 -48233.9358
##    340 14166177.9671             nan     0.1000 -72827.1866
##    360 13819904.3837             nan     0.1000 -54674.1344
##    380 13355863.2689             nan     0.1000 -25322.8731
##    400 12841534.0555             nan     0.1000 -54671.5074
##    420 12364297.0779             nan     0.1000 -14232.0485
##    440 12053033.9481             nan     0.1000 -30570.2334
##    460 11804731.6092             nan     0.1000 -11386.8525
##    480 11550336.1923             nan     0.1000 -48244.8463
##    500 11114927.6489             nan     0.1000 6057.0969

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 190015612.9782             nan     0.1000 32423555.9541
##      2 163553244.3556             nan     0.1000 26472744.0271
##      3 142272487.1161             nan     0.1000 22076973.9224
##      4 123900394.6963             nan     0.1000 19137096.8049
##      5 109004895.1778             nan     0.1000 15248544.1202
##      6 96712711.8537             nan     0.1000 12036146.6754
##      7 86461193.8383             nan     0.1000 9571886.6506
##      8 78067564.5157             nan     0.1000 8352550.3903
##      9 71058214.9193             nan     0.1000 7116513.5426
##     10 65135655.7636             nan     0.1000 5154604.6572
##     20 38012605.7791             nan     0.1000 1141569.3756
##     40 26611700.0167             nan     0.1000 132137.9760
##     60 22629988.7539             nan     0.1000 141047.8657
##     80 20359715.6581             nan     0.1000 -77199.4167
##    100 18611035.6017             nan     0.1000 -65487.5249
##    120 17237049.6888             nan     0.1000 -94552.9781
##    140 16034339.8332             nan     0.1000 -98200.2419
##    160 15206499.0185             nan     0.1000 -53119.3526
##    180 14677803.4490             nan     0.1000 -58856.3189
##    200 13844779.2750             nan     0.1000 -40472.4902
##    220 13097367.6671             nan     0.1000 -88964.5346
##    240 12310853.2895             nan     0.1000 -26489.7878
##    260 11615704.9213             nan     0.1000 -82920.7950
##    280 11115786.7083             nan     0.1000 -52831.3897
##    300 10647018.5605             nan     0.1000 -70053.9072
##    320 10173343.3415             nan     0.1000 -88007.4943
##    340  9822935.7951             nan     0.1000 -68278.2774
##    360  9494150.4080             nan     0.1000 -42388.2602
##    380  9244396.6997             nan     0.1000 -19146.1801
##    400  8927393.0012             nan     0.1000 -55301.7857
##    420  8597064.0392             nan     0.1000 -27179.7438
##    440  8407924.6567             nan     0.1000 -45260.4505
##    460  8108897.7012             nan     0.1000 -19886.4662
##    480  7772383.4226             nan     0.1000 -5766.7635
##    500  7460091.5577             nan     0.1000 -57608.7155

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 190305270.9184             nan     0.1000 35618019.2499
##      2 162186845.0603             nan     0.1000 26454352.8655
##      3 140120602.9042             nan     0.1000 22594583.6903
##      4 122309763.1215             nan     0.1000 18614281.8491
##      5 107237869.6398             nan     0.1000 15132624.6777
##      6 94360510.6266             nan     0.1000 11730370.4228
##      7 83388561.6508             nan     0.1000 9432204.0235
##      8 74989178.8610             nan     0.1000 8339811.5314
##      9 67707060.8625             nan     0.1000 7632668.3071
##     10 61803249.8210             nan     0.1000 5590947.4804
##     20 34190809.5142             nan     0.1000 973688.5954
##     40 22736706.3935             nan     0.1000 60924.7211
##     60 19513656.0213             nan     0.1000 143015.1348
##     80 17756727.2777             nan     0.1000 -10170.0986
##    100 16296337.8239             nan     0.1000 -84426.8114
##    120 14953981.9319             nan     0.1000 -50067.3804
##    140 13883259.1179             nan     0.1000 -90778.7782
##    160 13031712.5264             nan     0.1000 -50097.7634
##    180 12266139.2317             nan     0.1000 -57157.7153
##    200 11622050.3991             nan     0.1000 -63237.5062
##    220 10868550.2238             nan     0.1000 -42283.4934
##    240 10189290.7175             nan     0.1000 -87813.6810
##    260  9706814.7401             nan     0.1000 -37198.7763
##    280  9217196.0284             nan     0.1000 -54735.2637
##    300  8668922.2951             nan     0.1000 -41951.5654
##    320  8182880.5186             nan     0.1000 -73753.4146
##    340  7729189.4399             nan     0.1000 -48237.5742
##    360  7296890.3305             nan     0.1000 -40126.8832
##    380  6943727.4061             nan     0.1000 -23384.3638
##    400  6655128.9994             nan     0.1000 -41683.9400
```

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##    420  6384346.4101             nan     0.1000 -65438.6598
##    440  6104093.1655             nan     0.1000 -27067.7627
##    460  5881821.5531             nan     0.1000 -35338.1220
##    480  5592021.6570             nan     0.1000 -30248.5662
##    500  5353996.2905             nan     0.1000 -42169.0917

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 189474262.9704             nan     0.1000 33494419.7222
##      2 160975571.8246             nan     0.1000 27171687.1609
##      3 137906240.9013             nan     0.1000 21188311.4450
##      4 119153151.5611             nan     0.1000 18034164.8072
##      5 103570602.4237             nan     0.1000 14800856.2191
##      6 91082658.6484             nan     0.1000 12274983.6065
##      7 80784128.7831             nan     0.1000 9862053.5985
##      8 72233386.2730             nan     0.1000 7943145.1242
##      9 65242144.7085             nan     0.1000 7102153.3888
##     10 59113643.2808             nan     0.1000 5997157.9039
##     20 32240108.6264             nan     0.1000 1033431.2298
##     40 21994125.5770             nan     0.1000 83439.6406
##     60 18318052.4569             nan     0.1000 -42777.8837
##     80 16318293.4816             nan     0.1000 -14956.5694
##    100 14858048.5513             nan     0.1000 -60760.2623
##    120 13431808.5732             nan     0.1000 -16187.4300
##    140 12635649.0018             nan     0.1000 -94631.9441
##    160 11717886.5191             nan     0.1000 -110026.4693
##    180 10959125.7790             nan     0.1000 -43413.3469
##    200 10209389.5386             nan     0.1000 -59179.2042
##    220  9576700.1313             nan     0.1000 -82678.6452
```

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##    240  9011947.3398             nan     0.1000 -59204.6480
##    260  8405763.7914             nan     0.1000 -34871.5145
##    280  7858267.0720             nan     0.1000 -27629.0376
##    300  7425319.9729             nan     0.1000 -53552.1011
##    320  6890788.9795             nan     0.1000 -32437.2311
##    340  6506561.8515             nan     0.1000 -58068.8966
##    360  6147027.3914             nan     0.1000 -33203.1508
##    380  5768009.5181             nan     0.1000 -37761.6899
##    400  5491854.2305             nan     0.1000 -30922.6808
##    420  5191282.7434             nan     0.1000 -33749.8377
##    440  4921255.4303             nan     0.1000 -39602.8440
##    460  4633607.5856             nan     0.1000 -37440.5634
##    480  4402837.4810             nan     0.1000 -39869.6867
##    500  4199072.3286             nan     0.1000 -38357.6020

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 55: typevan has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 189286651.8001             nan     0.1000 34955999.7132
##      2 160391223.7510             nan     0.1000 29190767.3494
##      3 136589177.9949             nan     0.1000 21541000.0000
##      4 117654320.9804             nan     0.1000 17919033.8577
##      5 101879612.0971             nan     0.1000 15946381.2857
##      6 89587412.7775             nan     0.1000 12795033.8505
##      7 78820991.7288             nan     0.1000 9464555.1176
##      8 69613126.5163             nan     0.1000 8260956.3366
##      9 62637854.5852             nan     0.1000 6696500.8011
##     10 56642723.1696             nan     0.1000 5171988.9115
##     20 30803071.5390             nan     0.1000 925315.9770
##     40 20397242.2381             nan     0.1000 56531.0212
```

```
##     60 17383441.1538             nan     0.1000 -46875.2421
##     80 15156554.5592             nan     0.1000 -175048.5606
##    100 13330782.3527             nan     0.1000 -81364.7680
##    120 12048570.7099             nan     0.1000 -54759.8700
##    140 11007929.5957             nan     0.1000 -111661.7006
##    160 10041630.5418             nan     0.1000 -68408.1583
##    180  9111256.1318             nan     0.1000 -62884.4762
##    200  8426228.5306             nan     0.1000 -46109.2387
##    220  7600598.8477             nan     0.1000 -68788.5305
##    240  7030239.1673             nan     0.1000 -85062.3746
##    260  6531652.8631             nan     0.1000 -44757.0201
##    280  6019296.9431             nan     0.1000 -55293.2365
##    300  5644870.4500             nan     0.1000 -33921.6948
##    320  5318872.4180             nan     0.1000 -33533.2945
##    340  4955673.0568             nan     0.1000 -72157.3522
##    360  4632819.5925             nan     0.1000 -23626.2503
##    380  4326441.1332             nan     0.1000 -35079.2613
##    400  4106529.9216             nan     0.1000 -29920.5433
##    420  3886387.2652             nan     0.1000 -32934.4740
##    440  3646182.6227             nan     0.1000 -30419.5100
##    460  3439548.2789             nan     0.1000 -33734.3238
##    480  3246667.5492             nan     0.1000 -30934.2769
##    500  3054778.4504             nan     0.1000 -12293.7627

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206769336.3706             nan     0.0500 14882311.8318
##      2 193713008.8905             nan     0.0500 12147613.0420
##      3 181751624.0797             nan     0.0500 12481909.2600
##      4 170944994.3606             nan     0.0500 10762177.7172
##      5 160659368.8820             nan     0.0500 10257100.4548
##      6 151072896.0274             nan     0.0500 8563159.1347
```

```
##      7 143275651.3052             nan     0.0500 7616339.3716
##      8 135289282.0075             nan     0.0500 7751850.3957
##      9 128283248.2720             nan     0.0500 7126640.9966
##     10 122097424.9195             nan     0.0500 5899425.8768
##     20 82055089.7537             nan     0.0500 2681371.7126
##     40 51726586.8584             nan     0.0500 769503.1321
##     60 39979230.1842             nan     0.0500 217052.3795
##     80 33752485.5610             nan     0.0500 34951.3532
##    100 30610131.1391             nan     0.0500 14782.8652
##    120 28632526.2197             nan     0.0500 62052.7571
##    140 27415759.3028             nan     0.0500 55407.8427
##    160 26428197.1691             nan     0.0500 -35315.8970
##    180 25645047.2851             nan     0.0500 13788.2482
##    200 24914593.1345             nan     0.0500 -2137.8365
##    220 24183806.5531             nan     0.0500 -39397.4356
##    240 23577558.2651             nan     0.0500 -36052.2219
##    260 23058752.9682             nan     0.0500 4324.3458
##    280 22554768.0942             nan     0.0500 -29006.7755
##    300 22094586.9689             nan     0.0500 -20360.0817
##    320 21600771.5943             nan     0.0500 -45558.2331
##    340 21250683.4412             nan     0.0500 2350.1403
##    360 20840887.3358             nan     0.0500 14957.8944
##    380 20454817.0417             nan     0.0500 -64671.3757
##    400 20263881.7375             nan     0.0500 -34132.6749
##    420 19943609.4351             nan     0.0500 -27336.6510
##    440 19671693.1315             nan     0.0500 -14713.7405
##    460 19404323.2037             nan     0.0500 23309.8045
##    480 19130621.0478             nan     0.0500 -25346.0225
##    500 18953305.8965             nan     0.0500 -33168.6569

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 204932678.4448             nan     0.0500 16899141.7206
##      2 189736164.6896             nan     0.0500 14454728.0716
##      3 176359228.5966             nan     0.0500 13392231.6370
##      4 164586969.0375             nan     0.0500 12132845.3058
##      5 153416724.2009             nan     0.0500 10999093.8894
##      6 144013703.5930             nan     0.0500 9427724.1285
##      7 135299748.0496             nan     0.0500 8690583.5695
##      8 126811669.4090             nan     0.0500 8240774.6079
##      9 119032803.5846             nan     0.0500 7560189.5856
##     10 112153940.9005             nan     0.0500 6068760.5571
##     20 68950469.8849             nan     0.0500 2873274.8942
##     40 40649984.7221             nan     0.0500 589220.8559
##     60 31680181.4356             nan     0.0500 205208.3742
##     80 27588570.6115             nan     0.0500 44886.6459
##    100 25366555.8774             nan     0.0500 72338.1110
##    120 23428127.7820             nan     0.0500 18227.4107
##    140 22320341.1302             nan     0.0500 12894.8332
##    160 21293925.9256             nan     0.0500 -15094.1022
##    180 20600743.4175             nan     0.0500 6452.1774
##    200 19897020.3512             nan     0.0500 2410.4007
##    220 19347583.3856             nan     0.0500 -40409.6789
##    240 18826356.9657             nan     0.0500 -18537.9305
##    260 18282072.6063             nan     0.0500 3568.5685
##    280 17741511.2678             nan     0.0500 -42881.4744
##    300 17216691.2424             nan     0.0500 -12108.2157
##    320 16741496.1126             nan     0.0500 -33091.2089
##    340 16361511.6371             nan     0.0500 -89266.3952
##    360 15914583.4298             nan     0.0500 -16673.2418
##    380 15559224.2925             nan     0.0500 -38392.6744
##    400 15079095.2778             nan     0.0500 -22114.0420
##    420 14780412.4573             nan     0.0500 -59435.6299
##    440 14488812.4417             nan     0.0500 -24673.5763
##    460 14142446.8076             nan     0.0500 -34351.3211
##    480 13875788.2744             nan     0.0500 -9534.1106
##    500 13643771.6528             nan     0.0500 -44048.4751

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 204089552.2496             nan     0.0500 16718369.4241
##      2 189324100.7195             nan     0.0500 14118068.4746
##      3 175268927.4543             nan     0.0500 14394083.9591
##      4 162440212.0252             nan     0.0500 12637132.1489
##      5 150869638.6116             nan     0.0500 11471064.9861
##      6 140320111.9071             nan     0.0500 10352628.5917
##      7 130923309.8954             nan     0.0500 9514261.1498
##      8 122270357.6366             nan     0.0500 8571151.1436
##      9 114618998.8026             nan     0.0500 7594793.1390
##     10 107781136.1127             nan     0.0500 6843508.1383
##     20 64227681.4878             nan     0.0500 3148414.2161
##     40 36142735.7990             nan     0.0500 582669.4879
##     60 27524527.6787             nan     0.0500 129978.2563
##     80 23560993.3727             nan     0.0500 -1536.9715
##    100 21428079.6789             nan     0.0500 -1465.9212
##    120 19996539.7317             nan     0.0500 12666.6969
##    140 19035373.2933             nan     0.0500 39245.0618
##    160 17960288.3807             nan     0.0500 5177.1117
##    180 17187960.9862             nan     0.0500 -8213.3423
##    200 16467824.3259             nan     0.0500 -38216.4430
##    220 15844692.0119             nan     0.0500 -33783.3432
##    240 15198123.8806             nan     0.0500 -18096.7355
##    260 14705156.9732             nan     0.0500 -18993.3847
##    280 14222102.3914             nan     0.0500 -32859.8565
##    300 13743120.6251             nan     0.0500 -22995.7303
##    320 13394280.9004             nan     0.0500 -26301.7332
##    340 12958938.7262             nan     0.0500 -15109.0974
##    360 12596744.2727             nan     0.0500 -15779.9081
##    380 12267294.2317             nan     0.0500 -58117.2743
##    400 11907171.0835             nan     0.0500 -48185.8362
##    420 11624618.2957             nan     0.0500 -17306.6870
##    440 11286780.0492             nan     0.0500 -30401.0352
##    460 11036002.9874             nan     0.0500 -32459.8071
##    480 10739698.1209             nan     0.0500 -37333.4477
##    500 10506064.2307             nan     0.0500 -7451.7261

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203677017.1496             nan     0.0500 18043266.9140
##      2 188966235.5190             nan     0.0500 14507480.2855
##      3 174546228.0489             nan     0.0500 13752116.6071
##      4 161442098.5905             nan     0.0500 13464639.8407
##      5 150326188.3739             nan     0.0500 11199744.3810
##      6 139765796.1640             nan     0.0500 10168841.4766
##      7 130335536.1333             nan     0.0500 9231642.2489
##      8 121415090.7623             nan     0.0500 9076991.7559
##      9 113313582.1475             nan     0.0500 7974788.4270
##     10 106244990.5091             nan     0.0500 7388386.0967
##     20 60945263.6878             nan     0.0500 2718508.9381
##     40 33253826.1710             nan     0.0500 548398.2454
##     60 25300857.3542             nan     0.0500 220273.8465
##     80 21912642.3270             nan     0.0500 -117111.6146
##    100 19758888.6717             nan     0.0500 -8239.6435
##    120 17936783.8383             nan     0.0500 18506.8568
##    140 16910881.0152             nan     0.0500 -46537.0506
##    160 16167847.9088             nan     0.0500 -20383.9963
##    180 15405159.9669             nan     0.0500 -5381.5415
##    200 14632265.8371             nan     0.0500 -47843.4339
##    220 13831551.2457             nan     0.0500 -37632.1190
##    240 13300344.8254             nan     0.0500 -53490.0158
##    260 12762091.2588             nan     0.0500 -34396.3849
##    280 12267765.4780             nan     0.0500 -41473.0512
##    300 11735913.8230             nan     0.0500 -24102.3683
##    320 11255550.1662             nan     0.0500 -22127.1547
##    340 10765641.3322             nan     0.0500 -33834.9268
##    360 10382620.8449             nan     0.0500 -25561.9670
##    380 10052406.4204             nan     0.0500 -41580.2917
##    400  9769233.4180             nan     0.0500 -18070.7010
##    420  9386778.1328             nan     0.0500 -19039.5986
##    440  9088748.2135             nan     0.0500 -31440.5248
##    460  8834357.4427             nan     0.0500 -15629.5007
##    480  8613316.4201             nan     0.0500 -40551.2150
##    500  8348702.0736             nan     0.0500 -39949.7622

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203826148.6163             nan     0.0500 17692958.7933
##      2 187229289.1475             nan     0.0500 16080035.5670
##      3 172462564.9260             nan     0.0500 14345102.5293
##      4 159051032.5851             nan     0.0500 13779307.5258
##      5 147185637.5040             nan     0.0500 11587510.0457
##      6 136585810.8528             nan     0.0500 10757667.0907
##      7 127502168.5796             nan     0.0500 8957687.8409
##      8 118565810.3197             nan     0.0500 8653537.9074
##      9 110410976.2736             nan     0.0500 7825483.1231
##     10 103562108.3843             nan     0.0500 6758565.1924
##     20 57828498.5011              nan     0.0500 2741364.3574
##     40 30650770.0860              nan     0.0500 546789.3498
##     60 22875495.4038              nan     0.0500 35624.7441
##     80 19437064.4061              nan     0.0500 49371.3957
##    100 17330163.6718              nan     0.0500 -35839.8633
##    120 16034232.0678              nan     0.0500 -35058.0175
##    140 14915076.0004              nan     0.0500 -27537.0843
##    160 13850634.0562              nan     0.0500 -33659.2428
##    180 13055906.5057              nan     0.0500 -34933.4679
##    200 12484264.9364              nan     0.0500 -76181.4609
##    220 11858733.6260              nan     0.0500 -1713.3852
##    240 11283466.7572              nan     0.0500 -11063.8149
##    260 10822711.2004              nan     0.0500 -33500.4761
##    280 10375320.9984              nan     0.0500 -29231.3259
##    300  9971373.8590              nan     0.0500 -1445.3497
##    320  9597261.0243              nan     0.0500 -26258.5244
##    340  9151608.1621              nan     0.0500 -21708.3577
##    360  8817859.1577              nan     0.0500 -18312.5560
##    380  8529976.8196              nan     0.0500 -22317.2208
##    400  8177383.2428              nan     0.0500 -20653.1691
##    420  7905274.6588              nan     0.0500 -26605.8326
##    440  7622297.8819              nan     0.0500 -30281.2475
##    460  7328759.0891              nan     0.0500 -12429.6134
##    480  7062124.7740              nan     0.0500 -25390.4192
##    500  6865330.1929              nan     0.0500 -24834.4093

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203079890.7082             nan     0.0500 18211498.2819
##      2 186812589.8922             nan     0.0500 15616617.8907
##      3 172042880.2590             nan     0.0500 13532375.8207
##      4 158616214.7968             nan     0.0500 13209200.9652
##      5 146909063.8985             nan     0.0500 11844780.7635
##      6 135787818.7664             nan     0.0500 10731356.8079
##      7 125588222.3148             nan     0.0500 9399811.3391
##      8 116657027.3460             nan     0.0500 8799041.7937
##      9 108918885.5539             nan     0.0500 7446279.6596
##     10 101335752.9839             nan     0.0500 7238562.7163
##     20 55092384.1792             nan     0.0500 2819765.5294
##     40 27474752.9569             nan     0.0500 461244.6523
##     60 20927269.2056             nan     0.0500 31021.1970
##     80 17845672.9473             nan     0.0500 30820.8656
##    100 15974773.7598             nan     0.0500 -29598.1692
##    120 14623385.2530             nan     0.0500 -36930.3702
##    140 13295481.2478             nan     0.0500 -29198.0102
##    160 12336002.8488             nan     0.0500 -11762.9572
##    180 11525632.0163             nan     0.0500 10492.4020
##    200 10825328.3276             nan     0.0500 -21837.7357
##    220 10288368.5386             nan     0.0500 -1585.1444
##    240  9803397.4162             nan     0.0500 -33073.8813
##    260  9195102.9410             nan     0.0500 -9866.6779
##    280  8738214.8538             nan     0.0500 -35759.4405
##    300  8321426.4485             nan     0.0500 -15661.6421
##    320  7928244.4906             nan     0.0500 -17840.4815
##    340  7640052.4359             nan     0.0500 -31043.9341
##    360  7313706.2248             nan     0.0500 -28570.3247
##    380  6969132.6664             nan     0.0500 -12089.8568
##    400  6695308.1121             nan     0.0500 -34145.6558
##    420  6412798.3582             nan     0.0500 -30578.4173
##    440  6171492.5318             nan     0.0500 -6761.0270
##    460  5955755.2713             nan     0.0500 -35437.6285
##    480  5778567.8129             nan     0.0500 -17878.5626
##    500  5574337.7131             nan     0.0500 -15456.4253

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 193576445.4034             nan     0.1000 28992493.4148
##      2 169518256.6562             nan     0.1000 23959798.3648
##      3 149950271.0926             nan     0.1000 19973188.7392
##      4 134003932.5384             nan     0.1000 14345256.9576
##      5 121072913.0915             nan     0.1000 13695871.5824
##      6 110243617.3844             nan     0.1000 10670218.7509
##      7 100690812.3241             nan     0.1000 9280423.9544
##      8 93384880.6017             nan     0.1000 6593760.8673
##      9 86693133.8347             nan     0.1000 6067139.8296
##     10 81097721.1307             nan     0.1000 5759658.4823
##     20 51548126.1843             nan     0.1000 1571368.0539
##     40 33433936.9010             nan     0.1000 371344.8443
##     60 28329298.6751             nan     0.1000 -8727.2978
##     80 25931675.1555             nan     0.1000 89834.2502
##    100 24420805.8716             nan     0.1000 -61894.4540
##    120 23339063.5006             nan     0.1000 -108420.7316
##    140 22176589.2704             nan     0.1000 -19578.9516
##    160 21213790.9559             nan     0.1000 -10780.9580
##    180 20455309.8008             nan     0.1000 -77297.0815
##    200 19875149.1659             nan     0.1000 -30640.9934
##    220 19356285.4988             nan     0.1000 -7734.3676
##    240 18769591.8774             nan     0.1000 -18684.1756
##    260 18262398.8088             nan     0.1000 -105865.6564
##    280 17867381.0671             nan     0.1000 -10912.3722
##    300 17505547.1657             nan     0.1000 -14144.8755
##    320 17180558.9171             nan     0.1000 -18925.2460
##    340 16777195.0824             nan     0.1000 -59200.1190
##    360 16535927.4082             nan     0.1000 -60476.8185
##    380 16133478.8095             nan     0.1000 -7893.9977
##    400 15800391.2533             nan     0.1000 -51100.8890
##    420 15541505.2599             nan     0.1000 -67003.5417
##    440 15279910.3416             nan     0.1000 -86994.0411
##    460 15028075.3654             nan     0.1000 -36719.5047
##    480 14745941.0175             nan     0.1000 -34677.0233
##    500 14479150.2705             nan     0.1000 -19998.3207

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 192092274.2292             nan     0.1000 30705920.9577
##      2 165344701.7333             nan     0.1000 26694990.3931
##      3 143316684.7810             nan     0.1000 21608194.5119
##      4 125224452.6567             nan     0.1000 17674975.0003
##      5 110723474.2101             nan     0.1000 14931487.6321
##      6 99112704.3706              nan     0.1000 11570104.6567
##      7 89692914.5733              nan     0.1000 9532791.1689
##      8 81519681.4239              nan     0.1000 7520726.6903
##      9 74302007.7842              nan     0.1000 7156662.7380
##     10 68690000.0932              nan     0.1000 5710252.9141
##     20 40659323.4145              nan     0.1000 1050409.0564
##     40 27353013.2095              nan     0.1000 51089.8537
##     60 23748738.8922              nan     0.1000 -74617.0028
##     80 21643129.1844              nan     0.1000 -33219.7881
##    100 20334344.0287              nan     0.1000 -242.4288
##    120 19148786.7725              nan     0.1000 -106713.2108
##    140 18014690.7094              nan     0.1000 -18820.0929
##    160 17138065.6857              nan     0.1000 -30651.7064
##    180 16312439.5929              nan     0.1000 -33690.1158
##    200 15566848.4808              nan     0.1000 -61236.2917
##    220 14932363.2477              nan     0.1000 -43111.1645
##    240 14261057.4543              nan     0.1000 -8602.2719
##    260 13497366.6259              nan     0.1000 -25168.3819
##    280 13014015.2038              nan     0.1000 -24203.7259
##    300 12522648.3367              nan     0.1000 32337.5771
##    320 12028747.7761              nan     0.1000 -91088.2259
##    340 11650377.8603              nan     0.1000 -13770.8784
##    360 11240054.6983              nan     0.1000 -53218.3479
##    380 10868939.7853              nan     0.1000 -3837.0515
##    400 10565312.3504              nan     0.1000 -41672.2078
##    420 10257393.8766              nan     0.1000 -30303.6252
##    440 10029896.9568              nan     0.1000 -28374.0210
##    460  9721015.1209              nan     0.1000 -39995.7535
##    480  9407967.3701              nan     0.1000 -34526.7458
##    500  9117372.6274              nan     0.1000 -34786.0251
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188427076.9076             nan     0.1000 32800217.7821
##      2 161181768.2514             nan     0.1000 28336308.0744
##      3 139275095.1933             nan     0.1000 21243845.8686
##      4 120642102.2522             nan     0.1000 18211361.5963
##      5 106320586.7987             nan     0.1000 13924655.9999
##      6 93967012.7266             nan     0.1000 12208642.7102
##      7 83871816.5199             nan     0.1000 10595993.0024
##      8 75461642.3640             nan     0.1000 7262040.4471
##      9 68155349.1174             nan     0.1000 6781357.1900
##     10 61852113.0100             nan     0.1000 6251052.1675
##     20 35481493.6881             nan     0.1000 1052703.7343
##     40 23584935.7954             nan     0.1000  301.7863
##     60 19896578.1113             nan     0.1000 -8851.6723
##     80 17954812.4206             nan     0.1000 -19632.8020
##    100 16482360.9412             nan     0.1000 -145195.6636
##    120 15135321.5869             nan     0.1000 7578.2565
##    140 14202004.8856             nan     0.1000 -62550.2004
##    160 13506611.8941             nan     0.1000 -36267.1099
##    180 12677504.0146             nan     0.1000 -149635.4585
##    200 11993121.6243             nan     0.1000 -56968.6043
##    220 11469486.0471             nan     0.1000 -65269.7901
##    240 10941777.1533             nan     0.1000 -33213.5168
##    260 10409640.6245             nan     0.1000 -32282.7566
##    280  9923143.8704             nan     0.1000 -46834.0085
##    300  9515626.3471             nan     0.1000 -30322.7725
##    320  9090686.9573             nan     0.1000 -6483.3764
##    340  8669445.6222             nan     0.1000 -16902.4574
##    360  8259977.5367             nan     0.1000 -29140.7557
##    380  7940124.1046             nan     0.1000 -45846.6222
##    400  7578604.2332             nan     0.1000 7984.0149
```

```
##    420  7357582.5026             nan     0.1000 -40960.6823
##    440  7103364.4256             nan     0.1000 -33761.1318
##    460  6832949.6444             nan     0.1000 -34753.2355
##    480  6665590.5310             nan     0.1000 -78073.6965
##    500  6357178.2242             nan     0.1000 -24464.8841

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 189517962.2199             nan     0.1000 34755863.8357
##      2 161149345.1578             nan     0.1000 27349000.2027
##      3 137850213.2053             nan     0.1000 20805224.3897
##      4 118917454.7595             nan     0.1000 18833530.8899
##      5 103031539.9698             nan     0.1000 15269057.1284
##      6 90844635.8628             nan     0.1000 12102246.9855
##      7 80810663.5204             nan     0.1000 11052814.0424
##      8 72636868.0277             nan     0.1000 8189062.2567
##      9 65542402.3158             nan     0.1000 6867046.8846
##     10 59691234.2410             nan     0.1000 5685694.3401
##     20 32208282.5286             nan     0.1000 1308978.8367
##     40 21545074.0488             nan     0.1000 28305.5385
##     60 18362029.3467             nan     0.1000 -41618.4910
##     80 16031446.2909             nan     0.1000 -45598.8166
##    100 14637849.6130             nan     0.1000 25495.6345
##    120 13280929.9246             nan     0.1000 -25070.3149
##    140 12271567.3390             nan     0.1000 -70752.6413
##    160 11177026.6959             nan     0.1000 -35037.2519
##    180 10603023.6433             nan     0.1000 -39802.7328
##    200  9815843.7112             nan     0.1000 -42242.3723
##    220  9240930.8843             nan     0.1000 -29627.4830
##    240  8702782.3616             nan     0.1000 -69242.8109
##    260  8187753.5131             nan     0.1000 -49976.4952
##    280  7700146.8586             nan     0.1000 -102466.1686
```

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##    300  7224569.8591             nan     0.1000 -37653.3287
##    320  6841835.5717             nan     0.1000 -63876.7702
##    340  6546695.4866             nan     0.1000 -36705.2100
##    360  6259747.0070             nan     0.1000 -26018.2696
##    380  5974131.8772             nan     0.1000 -26454.9945
##    400  5741740.9426             nan     0.1000 -15734.1853
##    420  5498825.4740             nan     0.1000 -25209.0768
##    440  5282686.4043             nan     0.1000 -30094.4649
##    460  5115785.4898             nan     0.1000 -17131.4064
##    480  4913162.7823             nan     0.1000 -19340.9402
##    500  4694200.0188             nan     0.1000 -16287.2280

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 186617105.4489             nan     0.1000 31459187.7442
##      2 157695250.3443             nan     0.1000 26885224.9302
##      3 134963917.4808             nan     0.1000 22496210.4117
##      4 116200555.8053             nan     0.1000 18090904.2294
##      5 101130242.6825             nan     0.1000 14427647.1720
##      6 88262918.5318             nan     0.1000 12732914.9799
##      7 78589840.2954             nan     0.1000 9963988.3724
##      8 69443194.6112             nan     0.1000 8727867.0992
##      9 61958512.7938             nan     0.1000 7061948.8921
##     10 56047109.6376             nan     0.1000 6085708.8076
##     20 30129552.7290             nan     0.1000 773505.9113
##     40 19693878.0961             nan     0.1000 -91691.4050
##     60 16178888.8016             nan     0.1000 39381.9719
##     80 13943135.8904             nan     0.1000 -99175.5912
##    100 12499225.6056             nan     0.1000 -66123.4465
##    120 11372921.7814             nan     0.1000 -26869.1560
##    140 10344758.3677             nan     0.1000 -47916.5667
##    160  9424438.4450             nan     0.1000 -29016.1131
```

```
##    180  8603145.3352             nan     0.1000 2345.6152
##    200  7948668.4169             nan     0.1000 -44023.8319
##    220  7317877.0872             nan     0.1000 -10648.7395
##    240  6931753.1521             nan     0.1000 -53870.6909
##    260  6520752.7451             nan     0.1000 -46910.3120
##    280  6097950.0488             nan     0.1000 -26414.1726
##    300  5704306.3787             nan     0.1000 -41278.8183
##    320  5363716.1218             nan     0.1000 1265.1603
##    340  5079811.8599             nan     0.1000 -36070.2463
##    360  4833131.1336             nan     0.1000 -45327.1461
##    380  4615160.8750             nan     0.1000 -25534.8966
##    400  4415818.5433             nan     0.1000 -24203.1237
##    420  4191308.2422             nan     0.1000 -26976.9290
##    440  4029443.3089             nan     0.1000 -35269.0260
##    460  3859221.0256             nan     0.1000 -29062.9220
##    480  3695760.0487             nan     0.1000 -16624.8755
##    500  3539310.4398             nan     0.1000 -25177.4029

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 185584195.2108             nan     0.1000 35100517.7598
##      2 156270533.2079             nan     0.1000 27819549.1631
##      3 133486268.8184             nan     0.1000 23559920.3630
##      4 114774322.1666             nan     0.1000 17558189.9626
##      5 99079637.1934             nan     0.1000 14083538.1304
##      6 86632113.9157             nan     0.1000 12056426.8032
##      7 76060660.6399             nan     0.1000 9696171.1275
##      8 67391642.3457             nan     0.1000 8493417.9605
##      9 59765892.2207             nan     0.1000 6651260.3289
##     10 53979999.8893             nan     0.1000 5733654.1084
##     20 27593752.0924             nan     0.1000 971376.8521
##     40 17935233.2948             nan     0.1000 -65221.2891
```

```
##     60 14761137.9989             nan     0.1000 26592.9166
##     80 12616761.7363             nan     0.1000 31841.2384
##    100 11200093.3739             nan     0.1000 -113109.2822
##    120 10120976.1215             nan     0.1000 -75986.5006
##    140  9179398.5473             nan     0.1000 -23296.7275
##    160  8389449.5062             nan     0.1000 -86864.1161
##    180  7612224.1266             nan     0.1000 -82762.7687
##    200  7001779.4309             nan     0.1000 -26083.9363
##    220  6393460.4341             nan     0.1000 -39255.2025
##    240  5937169.5228             nan     0.1000 -42300.5901
##    260  5563460.3269             nan     0.1000 -27346.9679
##    280  5169661.0176             nan     0.1000 -44167.1271
##    300  4849182.2903             nan     0.1000 -39481.1984
##    320  4533167.1778             nan     0.1000 -37031.8636
##    340  4264731.7265             nan     0.1000 -49095.6079
##    360  4026923.7928             nan     0.1000 -28065.5082
##    380  3752074.2173             nan     0.1000 -30267.9227
##    400  3537151.6545             nan     0.1000 -5264.8341
##    420  3336040.5258             nan     0.1000 -19860.7711
##    440  3156499.6067             nan     0.1000 -19690.9505
##    460  3006561.5072             nan     0.1000 -33494.2532
##    480  2858653.9789             nan     0.1000 -17409.3143
##    500  2709801.0983             nan     0.1000 -21950.6316

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206859311.9445             nan     0.0500 15189241.9970
##      2 194088345.6051             nan     0.0500 12902037.8446
##      3 181967647.7294             nan     0.0500 12139242.1729
```

```
##      4 171024705.4305             nan     0.0500 11207850.1427
##      5 160419140.3366             nan     0.0500 10295804.1112
##      6 151642733.0884             nan     0.0500 9081777.1211
##      7 142991954.8545             nan     0.0500 7906022.6566
##      8 135638747.1056             nan     0.0500 7294604.6763
##      9 128985232.8209             nan     0.0500 6426992.8473
##     10 122587912.7872             nan     0.0500 6400223.6661
##     20 82534645.9709              nan     0.0500 2392055.9906
##     40 52340371.6997              nan     0.0500 866962.2128
##     60 40764223.0583              nan     0.0500 357617.3375
##     80 35059744.2361              nan     0.0500 112629.8492
##    100 31922624.6925              nan     0.0500 61076.3736
##    120 29970123.4953              nan     0.0500 43802.4604
##    140 28656367.0242              nan     0.0500 17706.2427
##    160 27694637.9003              nan     0.0500 -43774.4525
##    180 26827347.9136              nan     0.0500 6692.7837
##    200 26163126.8032              nan     0.0500 -41609.9666
##    220 25485438.1980              nan     0.0500 4311.9491
##    240 24952800.9234              nan     0.0500 -33225.0012
##    260 24388383.2745              nan     0.0500 -34329.3956
##    280 23916593.6813              nan     0.0500 -54230.1473
##    300 23493707.2686              nan     0.0500 -21107.6646
##    320 23066655.2519              nan     0.0500 -31953.6144
##    340 22654632.7130              nan     0.0500 -44764.7497
##    360 22327942.7003              nan     0.0500 -34279.3914
##    380 21913088.2332              nan     0.0500 -24406.8315
##    400 21546273.5976              nan     0.0500 -52178.9139
##    420 21243848.9654              nan     0.0500 -15156.1015
##    440 20953971.4080              nan     0.0500 -42581.7820
##    460 20729398.2085              nan     0.0500 -44266.3738
##    480 20408708.8610              nan     0.0500 -43281.6055
##    500 20157364.4857              nan     0.0500 -22194.4970

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205430060.9458             nan     0.0500 16282057.8216
##      2 190529188.7838             nan     0.0500 14303047.4413
##      3 177197073.5613             nan     0.0500 13378407.5019
##      4 164709436.9336             nan     0.0500 12177891.4303
##      5 153963767.7896             nan     0.0500 10744491.8727
##      6 143996589.4017             nan     0.0500 9562281.3745
##      7 135033888.7240             nan     0.0500 8704552.7102
##      8 127588753.0420             nan     0.0500 7665238.6150
##      9 120041382.7386             nan     0.0500 7512331.7052
##     10 113319069.6080             nan     0.0500 6494682.5942
##     20 70042173.5640             nan     0.0500 2725436.6578
##     40 41950952.2993             nan     0.0500 525838.9622
##     60 32707053.6179             nan     0.0500 65562.9196
##     80 28475768.7002             nan     0.0500 84929.7842
##    100 26384549.3680             nan     0.0500 -42187.9751
##    120 24931354.3054             nan     0.0500 22086.5262
##    140 23792059.4294             nan     0.0500 -24634.9069
##    160 22666936.0763             nan     0.0500 -35770.3178
##    180 21845852.7125             nan     0.0500 -10222.8284
##    200 21099293.6950             nan     0.0500 -64850.4922
##    220 20396416.5733             nan     0.0500 -29962.8194
##    240 19732302.4584             nan     0.0500 -21551.0048
##    260 19073293.3841             nan     0.0500 14739.7943
##    280 18559656.0215             nan     0.0500 -32441.4277
##    300 18132376.0282             nan     0.0500 -40453.3650
##    320 17604693.3068             nan     0.0500 -29194.8409
##    340 17278859.7996             nan     0.0500 -81326.6449
##    360 16815487.4684             nan     0.0500 -36878.3445
##    380 16486386.4881             nan     0.0500 -30211.0326
##    400 15970212.5226             nan     0.0500 -17491.0943
##    420 15636062.7381             nan     0.0500 -19779.8526
##    440 15315648.6000             nan     0.0500 -33306.6098
##    460 14961286.0768             nan     0.0500 -33320.9948
##    480 14613074.3159             nan     0.0500 -20905.9412
##    500 14295068.2921             nan     0.0500 -26883.9756

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205007351.6203             nan     0.0500 17262128.9469
##      2 190252243.0035             nan     0.0500 15462603.9488
##      3 176276966.5483             nan     0.0500 13712352.6804
##      4 163497852.6288             nan     0.0500 12884390.0702
##      5 152224270.7957             nan     0.0500 11099029.6219
##      6 142010167.0962             nan     0.0500 10404814.1479
##      7 132224099.0124             nan     0.0500 9708717.0497
##      8 123649952.2354             nan     0.0500 8515574.5705
##      9 115773480.0303             nan     0.0500 7812873.5105
##     10 108756910.3792             nan     0.0500 6938400.3872
##     20 64692974.9922              nan     0.0500 2707664.0784
##     40 37587818.3468              nan     0.0500 408592.3685
##     60 29510080.5555              nan     0.0500 163986.1086
##     80 25727467.4673              nan     0.0500 30961.2371
##    100 23263035.7697              nan     0.0500 -13408.7405
##    120 21825180.9419              nan     0.0500 1166.8828
##    140 20695113.1738              nan     0.0500 -32365.8839
##    160 19683823.8600              nan     0.0500 -10076.3962
##    180 18846501.7034              nan     0.0500 -34770.6955
##    200 18012715.2720              nan     0.0500 19674.2463
##    220 17269989.0244              nan     0.0500 -36996.5972
##    240 16595342.2832              nan     0.0500 -51063.5941
##    260 16014783.9797              nan     0.0500 -62113.2589
##    280 15468758.1988              nan     0.0500 -25477.9791
##    300 14957892.5464              nan     0.0500 -3461.9008
##    320 14399043.3641              nan     0.0500 -38680.8118
##    340 14013427.1096              nan     0.0500 -18804.2428
##    360 13647032.9002              nan     0.0500 -24275.7942
##    380 13302474.3459              nan     0.0500 -23468.7854
##    400 12923421.5685              nan     0.0500 -5652.5307
##    420 12502443.1524              nan     0.0500 -11658.5904
##    440 12234220.8768              nan     0.0500 -16777.3439
##    460 11857878.5622              nan     0.0500 -48814.8740
##    480 11504751.3493              nan     0.0500 -24401.5626
##    500 11220120.6624              nan     0.0500 -21637.4245

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 204280419.0710             nan     0.0500 17772214.3156
##      2 188566656.1025             nan     0.0500 16123054.4297
##      3 174495120.1968             nan     0.0500 14729367.6539
##      4 161516204.4153             nan     0.0500 12638623.4734
##      5 149893506.2136             nan     0.0500 10697304.5157
##      6 139154319.5830             nan     0.0500 10277899.6431
##      7 129640071.3185             nan     0.0500 8813276.9901
##      8 121146191.3365             nan     0.0500 8477120.0178
##      9 112894809.3929             nan     0.0500 8077940.1295
##     10 105886305.8789             nan     0.0500 7183994.5287
##     20 60793406.7548              nan     0.0500 2744107.8712
##     40 33365197.8588              nan     0.0500 409569.2293
##     60 25502663.6868              nan     0.0500 50752.9905
##     80 22222413.4127              nan     0.0500 -54017.1766
##    100 19954913.5390              nan     0.0500 -17762.5327
##    120 18689011.0669              nan     0.0500 10912.7152
##    140 17651220.2718              nan     0.0500 -55250.7561
##    160 16462004.6672              nan     0.0500 -16143.8513
##    180 15575019.0904              nan     0.0500 -33098.2098
##    200 14734456.1747              nan     0.0500 -21181.2813
##    220 13986074.5860              nan     0.0500 -22553.8563
##    240 13413912.0947              nan     0.0500 -2573.0780
##    260 12789456.8381              nan     0.0500 -34416.6753
##    280 12286353.3658              nan     0.0500 -24208.1991
##    300 11882071.8120              nan     0.0500 -40266.0671
##    320 11474942.4118              nan     0.0500 -43066.0211
##    340 11070456.2008              nan     0.0500 -8447.7259
##    360 10680219.1873              nan     0.0500 -8519.7687
##    380 10272484.7127              nan     0.0500 -22750.8154
##    400  9981295.7858              nan     0.0500 -16870.9783
##    420  9623052.4000              nan     0.0500 -27966.4668
##    440  9378489.2297              nan     0.0500 -15538.5431
##    460  9094168.4833              nan     0.0500 -11797.9559
##    480  8855419.1083              nan     0.0500 -20168.7104
##    500  8591563.4519              nan     0.0500 -6543.9272

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205628553.4579             nan     0.0500 16775811.5343
##      2 189571658.6489             nan     0.0500 16731379.5701
##      3 174904150.2950             nan     0.0500 14578111.7759
##      4 161438207.6934             nan     0.0500 12929405.1952
##      5 149410139.5475             nan     0.0500 12578101.8497
##      6 138216103.4969             nan     0.0500 10819725.9693
##      7 128174780.0566             nan     0.0500 9690224.5617
##      8 118995281.7541             nan     0.0500 8560572.7338
##      9 111103779.7766             nan     0.0500 7764548.4939
##     10 103829085.4740             nan     0.0500 7327825.4335
##     20 58143625.5573              nan     0.0500 2986709.6733
##     40 30453049.2436              nan     0.0500 600091.3177
##     60 23386763.9163              nan     0.0500 103989.5974
##     80 20028684.6033              nan     0.0500 41229.3385
##    100 18124192.6334              nan     0.0500 -85252.5064
##    120 16877782.9777              nan     0.0500 -45915.7912
##    140 15774700.6588              nan     0.0500 -46766.9472
##    160 14891627.5268              nan     0.0500 -22488.1971
##    180 13868925.8528              nan     0.0500 -30208.3978
##    200 13222656.4917              nan     0.0500 -28799.4651
##    220 12658664.0490              nan     0.0500 -20977.5649
##    240 12040825.3465              nan     0.0500 -27709.3905
##    260 11536914.4902              nan     0.0500 -25712.3206
##    280 11022297.2872              nan     0.0500 -46848.6138
##    300 10561164.0923              nan     0.0500 -18292.1426
##    320 10155322.0611              nan     0.0500 -10931.7125
##    340  9749297.6873              nan     0.0500 -39214.9162
##    360  9385434.7356              nan     0.0500 -23861.8317
##    380  9051483.8560              nan     0.0500 -22003.1764
##    400  8729306.2202              nan     0.0500 -30731.1597
```

```
##    420  8433102.7681             nan     0.0500 -34653.6405
##    440  8113610.9037             nan     0.0500 -291.4652
##    460  7846075.9978             nan     0.0500 -18653.5891
##    480  7547625.0141             nan     0.0500 -20462.4114
##    500  7317576.7803             nan     0.0500 -21184.4401

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205042320.9965             nan     0.0500 18040684.7680
##      2 188717481.8050             nan     0.0500 16425531.7314
##      3 173947099.8344             nan     0.0500 14136676.4109
##      4 160760115.3821             nan     0.0500 13267532.6038
##      5 148851124.4413             nan     0.0500 11434307.6138
##      6 137919913.0269             nan     0.0500 10599912.0454
##      7 127647441.6922             nan     0.0500 9965728.3590
##      8 118510098.5705             nan     0.0500 8577911.9273
##      9 110157692.8818             nan     0.0500 7964812.6960
##     10 102491923.0802             nan     0.0500 7153677.8773
##     20 56410158.6753             nan     0.0500 2830486.2904
##     40 28910560.7479             nan     0.0500 577068.0468
##     60 21443896.2826             nan     0.0500 125156.7933
##     80 18504697.9141             nan     0.0500 -3994.5715
##    100 16523820.9529             nan     0.0500 -52277.9908
##    120 15036631.4717             nan     0.0500 -83882.7699
##    140 13975094.7087             nan     0.0500 -10945.5466
##    160 13079938.7247             nan     0.0500 3773.9897
##    180 12036107.8451             nan     0.0500 -21564.9199
##    200 11305800.7893             nan     0.0500 28346.7912
##    220 10642806.3811             nan     0.0500 -27695.6081
```

```
##    240 10053141.5107             nan     0.0500 -44712.5855
##    260  9590945.0171             nan     0.0500 -19737.8167
##    280  9199040.7429             nan     0.0500 -15653.2791
##    300  8822769.8711             nan     0.0500 -45183.7066
##    320  8446440.2706             nan     0.0500 -19585.1124
##    340  8091000.4001             nan     0.0500 -33172.1349
##    360  7764331.3074             nan     0.0500 -33127.1170
##    380  7389560.4560             nan     0.0500 -23781.5581
##    400  7058299.7163             nan     0.0500 -35133.8006
##    420  6753437.4282             nan     0.0500 -21170.7648
##    440  6501262.6528             nan     0.0500 -21270.8683
##    460  6246566.6548             nan     0.0500 -18394.1523
##    480  5999578.4269             nan     0.0500 -15933.3882
##    500  5747815.7377             nan     0.0500 -25345.0055

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 193787006.2550             nan     0.1000 26293793.3092
##      2 170270522.9480             nan     0.1000 23918608.0110
##      3 150767508.2563             nan     0.1000 19761599.6982
##      4 134328241.8587             nan     0.1000 15719145.5385
##      5 120809159.5577             nan     0.1000 13450489.2805
##      6 110242189.6678             nan     0.1000 10912193.6546
##      7 100985263.2984             nan     0.1000 9044955.1428
##      8 93030122.2533              nan     0.1000 7530277.4167
##      9 87018736.8482              nan     0.1000 6029386.1102
##     10 81417521.8513              nan     0.1000 5118888.5554
##     20 52249126.5302              nan     0.1000 1388855.5968
##     40 35149304.5204              nan     0.1000 281421.7363
```

```
##     60 30121227.9224             nan     0.1000 -35259.9312
##     80 27487411.2943             nan     0.1000 -42284.6947
##    100 25976713.5020             nan     0.1000 -46159.3927
##    120 24822404.8465             nan     0.1000 -51919.6000
##    140 23691655.7511             nan     0.1000 -81434.9163
##    160 22781410.2781             nan     0.1000 6227.9903
##    180 22020753.8096             nan     0.1000 -19408.1452
##    200 21137253.6485             nan     0.1000 -87436.0839
##    220 20407918.0344             nan     0.1000 -2556.0847
##    240 20005729.6398             nan     0.1000 -115294.3448
##    260 19563219.5091             nan     0.1000 -44022.6204
##    280 19146845.5655             nan     0.1000 -23034.3715
##    300 18489537.8805             nan     0.1000 -107244.8350
##    320 18020539.1716             nan     0.1000 -47094.0485
##    340 17569546.7796             nan     0.1000 -107174.1981
##    360 17178247.6649             nan     0.1000 -51296.8315
##    380 16682225.0081             nan     0.1000 -43673.1599
##    400 16288191.8324             nan     0.1000 -54699.1328
##    420 15980209.6034             nan     0.1000 -54493.8893
##    440 15712298.1455             nan     0.1000 -50189.0803
##    460 15375076.3800             nan     0.1000 -17451.6963
##    480 15011685.7779             nan     0.1000 -34555.1210
##    500 14810939.5663             nan     0.1000 -4070.2150

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 190320733.8023             nan     0.1000 31707779.3930
##      2 164273683.7672             nan     0.1000 26094973.1326
##      3 143843414.2520             nan     0.1000 19818496.5803
```

```
##      4 125964829.8021             nan     0.1000 17052955.7133
##      5 110916865.9601             nan     0.1000 14558077.5279
##      6 99101380.7411              nan     0.1000 10786218.6464
##      7 89233781.4479              nan     0.1000 9839361.0984
##      8 81284527.6276              nan     0.1000 8113749.5496
##      9 74820230.5910              nan     0.1000 6188861.2371
##     10 69133302.7431              nan     0.1000 5612499.9470
##     20 41291763.0892              nan     0.1000 807910.9525
##     40 29176271.0995              nan     0.1000 -10301.4413
##     60 25255667.2629              nan     0.1000 -81594.7274
##     80 23000916.0079              nan     0.1000 -58067.5298
##    100 21223077.4985              nan     0.1000 21161.0934
##    120 19792867.7031              nan     0.1000 1614.3900
##    140 18852037.1421              nan     0.1000 -63043.5133
##    160 17925409.4715              nan     0.1000 -74781.7811
##    180 17031321.9755              nan     0.1000 -8314.6235
##    200 16207229.9242              nan     0.1000 -7579.3926
##    220 15455422.0192              nan     0.1000 -6538.5412
##    240 14666083.6979              nan     0.1000 -37203.7636
##    260 14190107.7807              nan     0.1000 -29052.5012
##    280 13673100.9830              nan     0.1000 -50991.3981
##    300 13228822.1560              nan     0.1000 -38511.4467
##    320 12859341.5384              nan     0.1000 -19634.9876
##    340 12380140.2711              nan     0.1000 -29965.4537
##    360 12066285.8897              nan     0.1000 -20194.0477
##    380 11750098.4608              nan     0.1000 -50566.0437
##    400 11307172.2724              nan     0.1000 -36629.6460
##    420 11013582.8088              nan     0.1000 -4258.2156
##    440 10760061.9225              nan     0.1000 -30626.2376
##    460 10415499.6973              nan     0.1000 -33315.2957
##    480 10140900.8618              nan     0.1000 -35288.5740
##    500  9860992.0719              nan     0.1000 -36561.9618

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188014669.0899             nan     0.1000 32184256.2701
##      2 161805110.2778             nan     0.1000 27222199.6086
##      3 140092465.9297             nan     0.1000 22641159.5308
##      4 122013591.6433             nan     0.1000 17322196.0735
##      5 107472429.9005             nan     0.1000 14821408.3783
##      6 95180554.6612             nan     0.1000 11938875.8395
##      7 84876872.9615             nan     0.1000 9443198.5643
##      8 76529866.3496             nan     0.1000 8366779.9031
##      9 69392728.5469             nan     0.1000 6621196.4185
##     10 63438824.3494             nan     0.1000 5750564.0250
##     20 37040389.4457             nan     0.1000 1359581.9371
##     40 25031236.0691             nan     0.1000 58425.6397
##     60 20948557.0789             nan     0.1000 -1525.9806
##     80 18564694.2064             nan     0.1000 -74598.4696
##    100 17109633.6604             nan     0.1000 -20904.7058
##    120 15791865.9886             nan     0.1000 -18221.7452
##    140 14775545.3032             nan     0.1000 -218840.7164
##    160 13714857.9050             nan     0.1000 -23350.4498
##    180 12853006.4137             nan     0.1000 -73129.2572
##    200 12165660.2952             nan     0.1000 -45379.7819
##    220 11626336.8471             nan     0.1000 -110336.9476
##    240 11043220.2815             nan     0.1000 -3097.7569
##    260 10476025.6772             nan     0.1000 -41975.8454
##    280 10020682.8434             nan     0.1000 -40356.3003
##    300  9619950.5521             nan     0.1000 -108660.6834
##    320  9194310.6059             nan     0.1000 -63508.9705
##    340  8768843.1801             nan     0.1000 -59801.2074
##    360  8337252.9572             nan     0.1000 -7642.5268
##    380  7997020.6987             nan     0.1000 -36745.8231
##    400  7717561.2123             nan     0.1000 -25958.5922
##    420  7538397.3379             nan     0.1000 -46674.9743
##    440  7206522.3408             nan     0.1000 -45046.9085
##    460  6982740.6723             nan     0.1000 -19679.5955
##    480  6678382.5860             nan     0.1000 -22272.4576
##    500  6496271.7880             nan     0.1000 -34583.9630

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188012398.2745             nan     0.1000 35052267.0147
##      2 161323484.5259             nan     0.1000 26876202.7625
##      3 138525554.2110             nan     0.1000 23206019.7110
##      4 120224655.4823             nan     0.1000 17415984.9216
##      5 105038685.1489             nan     0.1000 14230577.2825
##      6 92198460.2948             nan     0.1000 12119631.6238
##      7 81913130.8672             nan     0.1000 10391586.5024
##      8 73590686.5417             nan     0.1000 7981091.0622
##      9 66627404.7076             nan     0.1000 6663486.4289
##     10 60540269.9018             nan     0.1000 5088474.6793
##     20 32874639.5805             nan     0.1000 895581.3212
##     40 22132915.8911             nan     0.1000 -86158.5499
##     60 18811724.8921             nan     0.1000 -39621.0744
##     80 16761751.0383             nan     0.1000 -91960.6494
##    100 15295118.6605             nan     0.1000 -125305.6620
##    120 14205761.0063             nan     0.1000 -62893.7994
##    140 13150429.2543             nan     0.1000 -41525.7631
##    160 12132785.7422             nan     0.1000 -50214.7558
##    180 11374179.1096             nan     0.1000 -61566.9598
##    200 10700828.7871             nan     0.1000 -7108.1177
##    220 10108338.8236             nan     0.1000 -60541.0047
##    240  9416412.2018             nan     0.1000 -56095.2525
##    260  8737666.4148             nan     0.1000 -28240.9929
##    280  8334470.9578             nan     0.1000 -37037.4973
##    300  7913620.3019             nan     0.1000 -34577.4581
##    320  7577395.3456             nan     0.1000 -78453.9286
##    340  7228277.8381             nan     0.1000 -47989.2383
##    360  6863072.1467             nan     0.1000 -24670.9524
##    380  6543287.9069             nan     0.1000 -28860.0736
##    400  6196109.8682             nan     0.1000 -20852.1877
##    420  5976303.3551             nan     0.1000 -33195.8747
##    440  5677404.2287             nan     0.1000 -25836.5410
##    460  5416028.0130             nan     0.1000 -27657.0983
##    480  5178101.0867             nan     0.1000 -15798.3831
##    500  4959029.8425             nan     0.1000 -36607.6712

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 187435393.2065             nan     0.1000 34421611.1857
##      2 160314073.8445             nan     0.1000 28244288.3175
##      3 137649887.4107             nan     0.1000 22296317.7348
##      4 118425670.2041             nan     0.1000 18369660.6151
##      5 102523993.9901             nan     0.1000 15191402.7704
##      6 90018598.4021             nan     0.1000 12624696.9277
##      7 79349540.9976             nan     0.1000 10178134.0203
##      8 70210499.1005             nan     0.1000 8502747.0883
##      9 63077167.4933             nan     0.1000 7204085.4437
##     10 57097565.3957             nan     0.1000 5874581.4297
##     20 30480905.0253             nan     0.1000 919898.4747
##     40 20140945.6830             nan     0.1000 139808.7833
##     60 16991762.6921             nan     0.1000 -87182.4820
##     80 14881135.7201             nan     0.1000 23632.3390
##    100 13043007.6170             nan     0.1000 -6626.5114
##    120 11890589.4026             nan     0.1000 -49706.5567
##    140 10911455.5392             nan     0.1000 -76280.6251
##    160 10047976.3890             nan     0.1000 -56400.3732
##    180  9263074.7927             nan     0.1000 -63970.8890
##    200  8561395.0293             nan     0.1000 -71744.0846
##    220  7969557.7295             nan     0.1000 -47784.5320
##    240  7538972.0232             nan     0.1000 -36879.0705
##    260  6984795.8449             nan     0.1000 -42920.7169
##    280  6580201.6235             nan     0.1000 -61725.3455
##    300  6176784.8152             nan     0.1000 -47515.6996
##    320  5826127.6965             nan     0.1000 -37858.7636
##    340  5512014.9162             nan     0.1000 -18332.8657
##    360  5171568.8648             nan     0.1000 -17342.6029
##    380  4895191.5129             nan     0.1000 -40211.2406
##    400  4640067.8313             nan     0.1000 -21067.1090
##    420  4407541.7675             nan     0.1000 -731.0248
##    440  4219888.4967             nan     0.1000 -20093.0633
##    460  3989788.1595             nan     0.1000 -27891.7041
##    480  3787114.4059             nan     0.1000 -35018.4861
##    500  3609888.3200             nan     0.1000 -35578.8241

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 6: manufacturerdatsun has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 187105465.3877             nan     0.1000 34361545.3263
##      2 158267311.7827             nan     0.1000 29354559.0489
##      3 134881822.1481             nan     0.1000 23002535.7096
##      4 115929646.6013             nan     0.1000 19407652.1512
##      5 100743449.4813             nan     0.1000 14967881.4514
##      6 88280969.1744             nan     0.1000 12405839.8969
##      7 77871729.7238             nan     0.1000 9729088.6774
##      8 69275565.8832             nan     0.1000 8654940.3829
##      9 61916293.4600             nan     0.1000 7029015.3722
##     10 56084522.4007             nan     0.1000 5409978.0128
##     20 29110293.0076             nan     0.1000 706109.5449
##     40 18629425.1636             nan     0.1000 45967.5531
##     60 15557514.2481             nan     0.1000 -29488.9618
##     80 13607395.0519             nan     0.1000 -68990.9286
##    100 12062471.8066             nan     0.1000 -53788.2075
##    120 10533629.3275             nan     0.1000 -50468.2202
##    140  9388340.8071             nan     0.1000 -61150.0080
##    160  8597625.4433             nan     0.1000 -27202.1514
##    180  7727858.8977             nan     0.1000 -68652.8679
##    200  7189204.3654             nan     0.1000 -58926.1948
##    220  6655078.4258             nan     0.1000 -36808.5182
##    240  6115842.2789             nan     0.1000 -18159.5088
##    260  5700791.1372             nan     0.1000 -36585.9586
##    280  5330022.2083             nan     0.1000 -39004.5130
##    300  4991051.3281             nan     0.1000 -4502.6002
##    320  4647663.7100             nan     0.1000 -33586.6406
##    340  4350650.2299             nan     0.1000 -35953.7690
##    360  4092668.6365             nan     0.1000 -50107.8398
##    380  3817198.6642             nan     0.1000 -19394.6910
##    400  3580795.0238             nan     0.1000 -13842.5207
```

```
##    420  3382800.2241             nan     0.1000 -19418.2049
##    440  3183420.3906             nan     0.1000 -28456.0195
##    460  3003447.5572             nan     0.1000 -12844.1608
##    480  2846094.1037             nan     0.1000 -14389.7994
##    500  2669723.5177             nan     0.1000 -18440.7606
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206820272.1782             nan     0.0500 14352382.0410
##      2 193409145.0849             nan     0.0500 12791946.5603
##      3 181455731.8885             nan     0.0500 11948101.7882
##      4 170708519.2782             nan     0.0500 10495202.4432
##      5 160793445.3399             nan     0.0500 9981119.6882
##      6 152171420.8623             nan     0.0500 9154093.0327
##      7 144108645.6596             nan     0.0500 7536914.4991
##      8 136638636.0289             nan     0.0500 6763403.5675
##      9 129763576.6171             nan     0.0500 6874338.7131
##     10 123633792.9565             nan     0.0500 6481051.0956
##     20 84458990.8095              nan     0.0500 2627169.2512
##     40 54166285.1992              nan     0.0500 701938.4527
##     60 42352335.0698              nan     0.0500 248888.3163
##     80 36130789.7445              nan     0.0500 169988.2233
##    100 33175743.3196              nan     0.0500 65014.8652
##    120 31579612.8969              nan     0.0500 16945.1353
##    140 30111889.7566              nan     0.0500 16457.6685
```

```
##    160 28959904.1686             nan     0.0500 24162.6449
##    180 28018169.4888             nan     0.0500 -56430.7216
##    200 27313054.3068             nan     0.0500 -21628.7698
##    220 26570893.5657             nan     0.0500 -66781.1970
##    240 25911106.4738             nan     0.0500 -51997.4842
##    260 25456735.2094             nan     0.0500 -32431.2447
##    280 24941468.0058             nan     0.0500 -8629.5232
##    300 24490770.4385             nan     0.0500 -46026.9085
##    320 24026102.5028             nan     0.0500 -79233.3974
##    340 23519478.1057             nan     0.0500 -51835.7796
##    360 23123578.8072             nan     0.0500 -13571.4051
##    380 22697603.1434             nan     0.0500 -24509.4067
##    400 22323850.1837             nan     0.0500 -33323.5404
##    420 21888046.1281             nan     0.0500 -52131.9222
##    440 21606170.1180             nan     0.0500 -29762.4030
##    460 21356994.0629             nan     0.0500 -11920.7815
##    480 21108371.0618             nan     0.0500 -29686.4685
##    500 20867678.6634             nan     0.0500 -48230.6778

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205790809.1604             nan     0.0500 15675922.5615
##      2 192210541.2724             nan     0.0500 13510154.0954
##      3 178852224.8994             nan     0.0500 13778210.4477
##      4 166508509.7076             nan     0.0500 12554141.9302
```

```
##      5 155363639.3959             nan     0.0500 10741870.9389
##      6 145213101.6037             nan     0.0500 10255588.2792
##      7 136384688.9176             nan     0.0500 9113088.0148
##      8 128623929.8228             nan     0.0500 7865638.3876
##      9 121211953.5450             nan     0.0500 7377999.2488
##     10 114408720.1757             nan     0.0500 6661451.7233
##     20 72147499.7738              nan     0.0500 2967313.7849
##     40 43680438.0223              nan     0.0500 710722.8638
##     60 34070792.5803              nan     0.0500 201392.9480
##     80 29848504.1045              nan     0.0500 29611.6109
##    100 27314024.1421              nan     0.0500 26121.2355
##    120 25647160.4798              nan     0.0500 17858.7459
##    140 24351108.4453              nan     0.0500 -26925.0638
##    160 23261195.6086              nan     0.0500 56611.0974
##    180 22387603.0504              nan     0.0500 -95542.9502
##    200 21669928.6904              nan     0.0500 -46629.8607
##    220 21029453.7559              nan     0.0500 -48769.3167
##    240 20316008.5822              nan     0.0500 -15193.7394
##    260 19857240.5720              nan     0.0500 -52099.7711
##    280 19252038.3714              nan     0.0500 -365.3269
##    300 18769029.4086              nan     0.0500 -31075.1001
##    320 18373440.2312              nan     0.0500 -111760.8634
##    340 18001458.1487              nan     0.0500 -42693.3416
##    360 17533485.9905              nan     0.0500 -18339.6337
##    380 17187713.4285              nan     0.0500 -36169.2452
##    400 16766936.9168              nan     0.0500 7071.0919
##    420 16410290.0385              nan     0.0500 -10009.3883
##    440 16215852.6453              nan     0.0500 -42241.3124
##    460 15932803.1903              nan     0.0500 -27109.5117
##    480 15669824.3910              nan     0.0500 -16175.9353
##    500 15376340.4725              nan     0.0500 -61212.5844

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205047435.0542             nan     0.0500 15618482.0499
##      2 189747129.9095             nan     0.0500 14679357.4417
##      3 176405587.5166             nan     0.0500 13134269.4006
##      4 164088574.9212             nan     0.0500 12260820.5478
##      5 152749344.5311             nan     0.0500 11193874.6332
##      6 142506623.9489             nan     0.0500 10663281.2541
##      7 133460071.6973             nan     0.0500 9386486.0307
##      8 125340726.4965             nan     0.0500 8265296.8764
##      9 117825733.0702             nan     0.0500 7934600.8766
##     10 110877598.5389             nan     0.0500 6803615.0085
##     20 66126170.6957              nan     0.0500 2768828.1891
##     40 38052709.7635              nan     0.0500 583558.5653
##     60 29917227.9970              nan     0.0500 165515.9530
##     80 26174935.2811              nan     0.0500 -61453.1140
##    100 23638767.8687              nan     0.0500 -23423.3142
##    120 22179785.2435              nan     0.0500 25078.3891
##    140 21071658.0756              nan     0.0500 -17476.9395
##    160 20037204.9452              nan     0.0500 -61258.2834
##    180 19351284.7355              nan     0.0500 -56950.7965
##    200 18527548.0208              nan     0.0500 -42103.6039
##    220 17895774.6663              nan     0.0500 -34028.5132
##    240 17137331.3455              nan     0.0500 -13616.4443
##    260 16727027.3254              nan     0.0500 -30722.9575
##    280 16195397.3513              nan     0.0500 -43584.3359
##    300 15713444.1893              nan     0.0500 -36759.2354
##    320 15245152.6111              nan     0.0500 -35309.9900
##    340 14747986.5776              nan     0.0500 -54105.4657
##    360 14259603.4756              nan     0.0500 -35094.2202
##    380 13805212.3122              nan     0.0500 -18137.9053
##    400 13472540.4309              nan     0.0500 -38022.6670
##    420 13149679.5454              nan     0.0500 -16914.3897
##    440 12855409.9072              nan     0.0500 -18544.3137
##    460 12532183.0264              nan     0.0500 -22347.2774
##    480 12270304.7425              nan     0.0500 -42569.1165
##    500 12039999.2928              nan     0.0500 -21367.2262

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 204009741.9461             nan     0.0500 17215136.7078
##      2 188589734.0184             nan     0.0500 14268556.1592
##      3 174309220.2185             nan     0.0500 14038265.4536
##      4 161557432.9789             nan     0.0500 12166153.5790
##      5 150226665.0952             nan     0.0500 10885473.3973
##      6 140356205.8998             nan     0.0500 10642383.8324
##      7 130687521.9281             nan     0.0500 9601090.1117
##      8 122086861.3326             nan     0.0500 8236605.6047
##      9 114316356.5083             nan     0.0500 7393791.7025
##     10 107081540.4595             nan     0.0500 6918883.9895
##     20 63098371.7980              nan     0.0500 2944465.3910
##     40 35224037.9422              nan     0.0500 603748.0047
##     60 27147542.4346              nan     0.0500 172348.0046
##     80 23012720.5978              nan     0.0500 39148.2740
##    100 21113097.5734              nan     0.0500 -30213.3433
##    120 19423230.3338              nan     0.0500 -9827.3697
##    140 18485439.6517              nan     0.0500 -30977.1254
##    160 17615390.1778              nan     0.0500 -56593.8639
##    180 16723459.1428              nan     0.0500 -32490.6070
##    200 16027932.2026              nan     0.0500 -31360.3930
##    220 15375755.5315              nan     0.0500 -31153.2632
##    240 14698317.8004              nan     0.0500 -24092.5303
##    260 14168813.8471              nan     0.0500 -14594.3106
##    280 13719739.0068              nan     0.0500 -53472.0886
##    300 13192543.5424              nan     0.0500 -14349.9740
##    320 12791347.8285              nan     0.0500 -36952.6873
##    340 12326328.4368              nan     0.0500 -14275.6232
##    360 11974953.1771              nan     0.0500 -15844.6828
##    380 11613754.1479              nan     0.0500 -35684.1802
##    400 11199671.0528              nan     0.0500 -26117.5310
##    420 10823542.6585              nan     0.0500 -23157.8113
##    440 10538814.5664              nan     0.0500 -49146.7720
##    460 10313625.5640              nan     0.0500 -59548.9811
##    480  9960291.0750              nan     0.0500 -21096.7217
##    500  9726214.3720              nan     0.0500 -11150.2351

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 203744777.1219             nan     0.0500 16733437.9605
##      2 187902926.8613             nan     0.0500 14219036.9332
##      3 174802921.9953             nan     0.0500 13025836.6532
##      4 161894664.9275             nan     0.0500 13370187.4759
##      5 150163740.9370             nan     0.0500 12639930.2991
##      6 139429274.7658             nan     0.0500 10285020.8424
##      7 129463124.6093             nan     0.0500 9674588.3507
##      8 121030711.1953             nan     0.0500 8403260.9560
##      9 112689831.5615             nan     0.0500 8383344.3562
##     10 105489101.6999             nan     0.0500 6253474.5638
##     20 60374704.3332              nan     0.0500 3024048.2472
##     40 31999722.0363              nan     0.0500 485594.7768
##     60 24533155.8325              nan     0.0500 190302.0226
##     80 21363664.2737              nan     0.0500 23998.5105
##    100 18989819.0161              nan     0.0500 3597.3268
##    120 17451475.7103              nan     0.0500 -7172.5470
##    140 16077601.3094              nan     0.0500 -2584.7812
##    160 14995865.7482              nan     0.0500 -52976.6402
##    180 14092339.5838              nan     0.0500 -60203.8828
##    200 13444837.7022              nan     0.0500 -71871.7343
##    220 12825574.0221              nan     0.0500 -37973.3861
##    240 12227711.7181              nan     0.0500 -6040.5847
##    260 11706708.9267              nan     0.0500 -41067.6548
##    280 11250447.3864              nan     0.0500 -23673.5301
##    300 10771449.9405              nan     0.0500 -24063.9080
##    320 10362886.4094              nan     0.0500 -38617.9666
##    340 10040494.8598              nan     0.0500 -10085.9619
```

```
##    360  9594350.9047             nan     0.0500 -13340.4317
##    380  9204894.9351             nan     0.0500 -45050.5803
##    400  8914523.5508             nan     0.0500 -23281.9891
##    420  8576250.4792             nan     0.0500 -22207.3546
##    440  8317464.6982             nan     0.0500 -19036.7071
##    460  8018563.3943             nan     0.0500 -12609.1574
##    480  7682477.3261             nan     0.0500 -17572.9253
##    500  7468419.0004             nan     0.0500 -16021.7493

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 204048057.0903             nan     0.0500 17511163.4429
##      2 187668144.4541             nan     0.0500 15769192.6045
##      3 172699592.0810             nan     0.0500 14805053.2867
##      4 159324487.4136             nan     0.0500 12938303.7040
##      5 147410800.6251             nan     0.0500 11238715.2167
##      6 136376983.1846             nan     0.0500 10872124.5622
##      7 126773387.9872             nan     0.0500 10075156.0387
##      8 117805938.4201             nan     0.0500 8916956.8833
##      9 109632915.4940             nan     0.0500 7682604.5483
##     10 102756295.2755             nan     0.0500 6917096.2013
##     20 56993073.5019             nan     0.0500 2615035.6587
##     40 29189927.3392             nan     0.0500 249127.6225
##     60 21991492.1086             nan     0.0500 211252.7887
##     80 19067722.7580             nan     0.0500 61117.5345
```

```
##    100 16916141.8708             nan     0.0500 4257.7729
##    120 15422283.5790             nan     0.0500 -75910.6694
##    140 14369546.6077             nan     0.0500 -45004.2014
##    160 13428254.1611             nan     0.0500 -1297.0480
##    180 12670644.9926             nan     0.0500 -11300.3815
##    200 11980777.7638             nan     0.0500 -17219.6784
##    220 11472401.6975             nan     0.0500 -48656.9534
##    240 10996269.1150             nan     0.0500 -54929.1372
##    260 10370275.9881             nan     0.0500 -31582.9088
##    280  9876679.3352             nan     0.0500 1151.3305
##    300  9475310.8432             nan     0.0500 -17859.1938
##    320  9040808.5348             nan     0.0500 -31479.0988
##    340  8671675.8994             nan     0.0500 -16130.6257
##    360  8399941.5396             nan     0.0500 -21247.3068
##    380  8058610.3224             nan     0.0500 -17775.3440
##    400  7690756.4574             nan     0.0500 -42015.4390
##    420  7386360.5788             nan     0.0500 -24577.7793
##    440  7065029.4446             nan     0.0500 -26497.1057
##    460  6754554.4225             nan     0.0500 -24397.0346
##    480  6483167.3031             nan     0.0500 -17066.8350
##    500  6226438.6791             nan     0.0500 -26554.7936

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 192839389.4055             nan     0.1000 28710290.1093
```

```
##      2 169362767.0893             nan     0.1000 23418440.3057
##      3 150437248.3574             nan     0.1000 18461474.8375
##      4 134309187.3492             nan     0.1000 15186343.0219
##      5 120630820.3319             nan     0.1000 11963552.8724
##      6 109714899.0343             nan     0.1000 9105214.4960
##      7 100633128.9728             nan     0.1000 8940860.8699
##      8 93372199.8371              nan     0.1000 6810807.4476
##      9 87313517.7338              nan     0.1000 5631076.6746
##     10 82240603.6478              nan     0.1000 5602919.8358
##     20 53861733.8600              nan     0.1000 1501023.6387
##     40 36049854.4158              nan     0.1000 267678.6063
##     60 31026240.6550              nan     0.1000 94752.9484
##     80 28634524.8646              nan     0.1000 -37678.8491
##    100 27231680.3923              nan     0.1000 -101311.8383
##    120 25846024.1081              nan     0.1000 -139814.9618
##    140 24779384.0871              nan     0.1000 -122919.1646
##    160 23840196.0975              nan     0.1000 -80425.4306
##    180 22968173.8531              nan     0.1000 -46091.2427
##    200 22412300.1151              nan     0.1000 -76189.3252
##    220 21683338.6993              nan     0.1000 -32812.2746
##    240 21116034.5109              nan     0.1000 -61717.2180
##    260 20550738.2916              nan     0.1000 -133390.9485
##    280 20063084.0070              nan     0.1000 -66209.0904
##    300 19571963.5408              nan     0.1000 -28613.8048
##    320 18991602.0575              nan     0.1000 11036.3940
##    340 18495521.0972              nan     0.1000 -50946.6627
##    360 18135010.8188              nan     0.1000 -18686.2785
##    380 17887894.1031              nan     0.1000 -39085.0516
##    400 17482523.3892              nan     0.1000 -60984.7865
##    420 17167542.8613              nan     0.1000 -88455.2720
##    440 16912221.3640              nan     0.1000 -29919.8690
##    460 16600019.8203              nan     0.1000 -89971.7930
##    480 16350727.9307              nan     0.1000 -62319.0977
##    500 16074398.7314              nan     0.1000 -20721.4883

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 189432772.5284             nan     0.1000 31567764.5617
##      2 164428567.9803             nan     0.1000 25073009.0740
##      3 143559362.9404             nan     0.1000 21780006.8887
##      4 126641241.1552             nan     0.1000 18204436.8442
##      5 112807038.0408             nan     0.1000 12990214.2054
##      6 101236175.5651             nan     0.1000 11694888.9628
##      7 91512008.9446             nan     0.1000 9095215.2972
##      8 83555940.2743             nan     0.1000 7522330.3105
##      9 76700762.2698             nan     0.1000 7259572.0545
##     10 71295283.1666             nan     0.1000 5608586.8383
##     20 42472769.3626             nan     0.1000 1461716.4975
##     40 30093805.4645             nan     0.1000 323834.9092
##     60 26560158.8819             nan     0.1000 -75956.9464
##     80 24680596.3870             nan     0.1000 -27718.3221
##    100 22879843.6656             nan     0.1000 48067.4791
##    120 21446820.3881             nan     0.1000 -52532.0025
##    140 20440995.8504             nan     0.1000 -70758.2884
##    160 19427756.4284             nan     0.1000 -78745.3161
##    180 18458149.2702             nan     0.1000 -50931.9104
##    200 17834001.4378             nan     0.1000 -63861.7126
##    220 16948394.8059             nan     0.1000 -32712.1373
##    240 16483354.2279             nan     0.1000 -71082.9024
##    260 15893813.1315             nan     0.1000 -63895.8498
##    280 15308465.1811             nan     0.1000 -9799.4553
##    300 14973013.4511             nan     0.1000 -136966.3321
##    320 14493742.7544             nan     0.1000 -19185.7808
##    340 14056110.6343             nan     0.1000 -52706.0313
##    360 13656778.2731             nan     0.1000 -41417.6858
##    380 13309281.9003             nan     0.1000 -14500.5522
##    400 12927113.1072             nan     0.1000 -19010.8931
##    420 12617071.1824             nan     0.1000 -39072.3726
##    440 12291930.2654             nan     0.1000 -56234.1457
##    460 11933842.6623             nan     0.1000 -83433.0827
##    480 11619045.1908             nan     0.1000 -54106.2590
##    500 11288108.6723             nan     0.1000 -31087.8534

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

##  Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##       1 188944345.1501             nan     0.1000 33389858.4332
##       2 162437435.4782             nan     0.1000 26667723.7044
##       3 140966528.7080             nan     0.1000 19992696.5834
##       4 122996658.9126             nan     0.1000 18014520.3635
##       5 108209328.0548             nan     0.1000 14806635.0050
##       6 96251015.0605             nan     0.1000 12374068.1151
##       7 86509907.8325             nan     0.1000 10370428.9722
##       8 78233051.5274             nan     0.1000 7862863.0837
##       9 71284468.7062             nan     0.1000 6803918.3927
##      10 65315279.9370             nan     0.1000 5569242.6006
##      20 38153444.2094             nan     0.1000 829883.1687
##      40 25384804.1494             nan     0.1000 -140181.3746
##      60 22303165.4316             nan     0.1000 9470.4010
##      80 19707443.6552             nan     0.1000 -45333.8618
##     100 18364029.1443             nan     0.1000 -78779.2400
##     120 17166277.4206             nan     0.1000 -151977.5595
##     140 16308670.8085             nan     0.1000 -80911.0597
##     160 15557097.3562             nan     0.1000 -111670.9783
##     180 14752965.6244             nan     0.1000 -26504.3321
##     200 13931242.4799             nan     0.1000 -55340.8409
##     220 13253616.4180             nan     0.1000 -85162.5549
##     240 12721783.7670             nan     0.1000 -113882.5381
##     260 12100125.1555             nan     0.1000 -41894.1606
##     280 11517083.9979             nan     0.1000 -96141.8947
##     300 11090598.6773             nan     0.1000 -28588.1661
##     320 10518413.8871             nan     0.1000 -12036.1843
##     340 10126057.4700             nan     0.1000 -53217.5818
##     360  9820254.9658             nan     0.1000 -43119.9062
##     380  9487072.2595             nan     0.1000 -29351.0268
##     400  9103124.2578             nan     0.1000 -56612.2609
##     420  8774990.3438             nan     0.1000 -89442.9687
##     440  8475474.0358             nan     0.1000 -84589.9847
##     460  8221544.9719             nan     0.1000 -59507.7243
##     480  7933893.5178             nan     0.1000 -32464.6002
##     500  7669836.4951             nan     0.1000 -40122.0308
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 187307166.1972             nan     0.1000 32274479.7816
##      2 161358957.4573             nan     0.1000 27298328.9123
##      3 138334118.2613             nan     0.1000 23827981.5851
##      4 120007563.3567             nan     0.1000 17923395.9797
##      5 105450123.6075             nan     0.1000 14345845.1432
##      6 93140173.0629             nan     0.1000 11667569.8771
##      7 83436655.6044             nan     0.1000 9435850.8351
##      8 75097482.3697             nan     0.1000 8371587.4835
##      9 67908066.5060             nan     0.1000 7402545.4248
##     10 61919303.6279             nan     0.1000 6013889.6885
##     20 34796573.4904             nan     0.1000 830969.7251
##     40 23120023.6518             nan     0.1000 -66798.7158
##     60 19906769.9774             nan     0.1000 -183868.1405
##     80 17769628.1667             nan     0.1000 -191456.0506
##    100 16043590.7180             nan     0.1000 -122995.4826
##    120 14596352.4857             nan     0.1000 -60862.5941
##    140 13470874.3237             nan     0.1000 -52771.5723
##    160 12527945.0901             nan     0.1000 -60772.5727
##    180 11734860.5423             nan     0.1000 -121116.4245
##    200 10998017.4129             nan     0.1000 -90442.7178
##    220 10318116.2748             nan     0.1000 -59825.9683
##    240  9638328.6508             nan     0.1000 -72373.9811
##    260  9093476.5535             nan     0.1000 -26873.5717
##    280  8702680.9051             nan     0.1000 -27958.4955
```

```
##    300  8210665.6482             nan     0.1000 -28297.9666
##    320  7793503.1688             nan     0.1000 -10227.4448
##    340  7490351.5911             nan     0.1000 -37573.9986
##    360  7132263.0153             nan     0.1000 -50648.3043
##    380  6849757.4169             nan     0.1000 -58337.8319
##    400  6486448.4121             nan     0.1000 -4978.2716
##    420  6215680.1963             nan     0.1000 -18698.1773
##    440  5965359.9024             nan     0.1000 -27208.9902
##    460  5748720.2273             nan     0.1000 -37195.4642
##    480  5473421.6275             nan     0.1000 -23361.1862
##    500  5242826.7536             nan     0.1000 -22291.7382

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 187733173.6832             nan     0.1000 34816120.3172
##      2 160506120.5042             nan     0.1000 26800103.1501
##      3 138235806.5811             nan     0.1000 23301790.7917
##      4 119075462.1474             nan     0.1000 18116352.0255
##      5 104383156.7118             nan     0.1000 13885047.5565
##      6 91976670.9878             nan     0.1000 12131565.8259
##      7 80994223.2163             nan     0.1000 10418459.7780
##      8 72057407.6279             nan     0.1000 8278869.9396
##      9 65668735.1534             nan     0.1000 6400482.6271
##     10 59667550.2696             nan     0.1000 5474529.4006
##     20 31944587.4629             nan     0.1000 1244439.7161
```

```
##     40 20637780.9641             nan     0.1000 -18921.9209
##     60 17385151.1449             nan     0.1000 -21953.5755
##     80 15494571.5019             nan     0.1000 -67389.9209
##    100 13915509.0854             nan     0.1000 -101307.0164
##    120 12603164.7886             nan     0.1000 -110675.5832
##    140 11477643.0471             nan     0.1000 -25650.4881
##    160 10701389.6889             nan     0.1000 -90309.7404
##    180  9861374.1045             nan     0.1000 -67591.4609
##    200  9230557.7772             nan     0.1000 -54448.5836
##    220  8518470.0957             nan     0.1000 -35248.6765
##    240  8018145.6593             nan     0.1000 -61068.2088
##    260  7596278.3391             nan     0.1000 -37219.6066
##    280  7171563.9539             nan     0.1000 -28403.8431
##    300  6617628.4587             nan     0.1000 -25705.6226
##    320  6271947.1119             nan     0.1000 -44369.3170
##    340  5886741.6070             nan     0.1000 -46391.7235
##    360  5596895.8303             nan     0.1000 -30436.6699
##    380  5198938.7650             nan     0.1000 -30981.2436
##    400  4931766.2576             nan     0.1000 -39337.0551
##    420  4671042.1101             nan     0.1000 -23819.3434
##    440  4409753.0128             nan     0.1000 -34664.8245
##    460  4191052.7465             nan     0.1000 -31679.1281
##    480  3997275.6832             nan     0.1000 -21958.4849
##    500  3814402.3832             nan     0.1000 -34348.1199

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 19: manufacturermazda has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 105: statesd has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188771372.8176             nan     0.1000 34292692.6284
##      2 159745728.7792             nan     0.1000 25536141.2646
##      3 136210558.9838             nan     0.1000 22587320.9821
##      4 117559076.0301             nan     0.1000 17578330.4518
##      5 101800096.8784             nan     0.1000 14697340.8719
##      6 88585664.6752             nan     0.1000 12697509.7690
##      7 78410547.9700             nan     0.1000 10762106.2575
##      8 69717994.2633             nan     0.1000 7859546.7856
##      9 62440026.8859             nan     0.1000 6854670.7068
##     10 56324632.9981             nan     0.1000 5880171.7598
##     20 29519992.3038             nan     0.1000 939057.6193
##     40 19682752.1430             nan     0.1000 76497.7460
##     60 16145477.5203             nan     0.1000 -103888.2102
##     80 13986297.4141             nan     0.1000 -190219.6445
##    100 12645773.7633             nan     0.1000 -67176.0654
##    120 11468829.8195             nan     0.1000 -104129.8307
##    140 10255386.4816             nan     0.1000 14126.4952
##    160  9398990.6535             nan     0.1000 -82868.0682
##    180  8623354.0019             nan     0.1000 -49634.5324
##    200  7881714.5809             nan     0.1000 -21798.9959
##    220  7292579.6969             nan     0.1000 -75289.1256
##    240  6717627.7276             nan     0.1000 -31083.1072
##    260  6177165.7001             nan     0.1000 -27943.5241
##    280  5731512.4024             nan     0.1000 -37246.7294
##    300  5359649.4562             nan     0.1000 -24675.1245
##    320  4967403.7565             nan     0.1000 -20509.1227
##    340  4665139.0347             nan     0.1000 -57147.0751
##    360  4421146.0664             nan     0.1000 -20383.7448
##    380  4162374.2306             nan     0.1000 -37805.0087
##    400  3889116.2651             nan     0.1000 -5513.4745
##    420  3690994.9186             nan     0.1000 -20091.1583
##    440  3463525.6598             nan     0.1000 -22272.7353
##    460  3304036.1741             nan     0.1000 -17604.8112
##    480  3146409.1721             nan     0.1000 -29769.6192
##    500  2973317.1517             nan     0.1000 -22739.0171

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 209595802.1228             nan     0.0500 14883042.1101
##      2 196374089.1663             nan     0.0500 13511888.8036
##      3 183715645.3722             nan     0.0500 12167444.3381
##      4 172285198.4973             nan     0.0500 10736000.8110
##      5 161768721.2935             nan     0.0500 10084606.0119
##      6 152598019.1758             nan     0.0500 9116163.5178
##      7 144104004.1924             nan     0.0500 8574323.2897
##      8 136339214.9103             nan     0.0500 7665697.1228
##      9 129584471.4212             nan     0.0500 6944568.4487
##     10 123107638.8734             nan     0.0500 6217299.3063
##     20 81742434.4983              nan     0.0500 2610504.4747
##     40 50998794.7065              nan     0.0500 641407.5720
##     60 39787079.0214              nan     0.0500 389313.4896
##     80 34093457.6178              nan     0.0500 92527.3142
##    100 30889091.2788              nan     0.0500 43106.6996
##    120 29096400.0558              nan     0.0500 -31709.8971
##    140 27756852.7277              nan     0.0500 -5586.1211
##    160 26769927.3961              nan     0.0500 20631.6690
##    180 25820489.5174              nan     0.0500 -9452.3185
##    200 25049730.3546              nan     0.0500 -2063.8903
##    220 24323745.1979              nan     0.0500 -31259.6886
##    240 23726663.5686              nan     0.0500 2116.7213
##    260 23255658.2543              nan     0.0500 -15551.4361
##    280 22721332.7683              nan     0.0500 -38202.1894
##    300 22266130.5982              nan     0.0500 -18892.1834
##    320 21783870.8512              nan     0.0500 -30512.9900
##    340 21279331.8637              nan     0.0500 -48967.3124
##    360 20865087.5666              nan     0.0500 -6773.2728
##    380 20476515.1154              nan     0.0500 -53695.0087
##    400 20142959.4762              nan     0.0500 -19063.4307
##    420 19776436.1692              nan     0.0500 -4016.5735
##    440 19369632.8120              nan     0.0500 -28212.4710
##    460 19058295.7199              nan     0.0500 -42690.3029
##    480 18802809.2642              nan     0.0500 -653.2531
##    500 18531900.3876              nan     0.0500 -26632.9636

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 207742518.5495             nan     0.0500 15957098.0877
##      2 192882945.2105             nan     0.0500 15972778.2496
##      3 179721402.4944             nan     0.0500 13854119.0673
##      4 167490553.5294             nan     0.0500 12316163.2828
##      5 156290199.2959             nan     0.0500 11444753.8547
##      6 146108091.6077             nan     0.0500 10285159.4705
##      7 136690112.5402             nan     0.0500 9055899.9501
##      8 128480496.7716             nan     0.0500 8115196.0510
##      9 120855190.9423             nan     0.0500 7470343.3778
##     10 113923595.1804             nan     0.0500 7147109.1307
##     20 69541495.5754             nan     0.0500 2724531.4550
##     40 41470202.2932             nan     0.0500 564307.1087
##     60 32407433.8470             nan     0.0500 199836.6317
##     80 27972039.2935             nan     0.0500 96476.7820
##    100 25763890.7352             nan     0.0500 42289.9316
##    120 24265889.3625             nan     0.0500 8458.9316
##    140 22948900.5013             nan     0.0500 -6713.6553
##    160 21994729.0730             nan     0.0500 3236.9090
##    180 21025256.3085             nan     0.0500 2244.8661
##    200 20330456.2629             nan     0.0500 -24918.5035
##    220 19661043.2906             nan     0.0500 -8430.7873
##    240 19003229.3995             nan     0.0500 -19317.9644
##    260 18457661.7585             nan     0.0500 -41121.7344
##    280 17930902.0544             nan     0.0500 -22112.8108
##    300 17493270.0273             nan     0.0500 -64783.1186
##    320 17103054.8215             nan     0.0500 -37419.3093
##    340 16720608.0493             nan     0.0500 -28891.7178
##    360 16375701.6348             nan     0.0500 -31533.3794
##    380 16017642.8321             nan     0.0500 -85583.1687
##    400 15564539.9824             nan     0.0500 -27291.2350
##    420 15228848.2589             nan     0.0500 -31665.2883
##    440 15005308.2836             nan     0.0500 -23697.8100
##    460 14719399.8292             nan     0.0500 -33755.4712
##    480 14403353.0214             nan     0.0500 -1264.2259
##    500 14125837.5992             nan     0.0500 -57448.0089

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206874244.0098             nan     0.0500 17633068.0004
##      2 192077661.7212             nan     0.0500 15491412.6569
##      3 177508409.8641             nan     0.0500 14391386.8383
##      4 164613950.9773             nan     0.0500 12114584.0122
##      5 152779235.3835             nan     0.0500 12042959.2656
##      6 142149781.8336             nan     0.0500 9274049.7243
##      7 132555324.6767             nan     0.0500 9593129.5950
##      8 123962197.6165             nan     0.0500 8793448.0728
##      9 116264003.0120             nan     0.0500 7694050.0985
##     10 108995929.7802             nan     0.0500 7260765.6474
##     20 65030615.3274              nan     0.0500 2404688.5650
##     40 36813284.7897              nan     0.0500 680830.0289
##     60 28139689.7883              nan     0.0500 199919.4104
##     80 24303624.7384              nan     0.0500 -6150.2094
##    100 22106428.0952              nan     0.0500 14732.0801
##    120 20834373.5741              nan     0.0500 -55104.7721
##    140 19712676.7628              nan     0.0500 -10960.2713
##    160 18633126.2377              nan     0.0500 -14529.5658
##    180 17647450.5956              nan     0.0500 -8697.2370
##    200 16849850.8080              nan     0.0500 -900.9546
##    220 16211616.8487              nan     0.0500 -10913.5008
##    240 15683897.7372              nan     0.0500 -88545.6712
##    260 15093727.5601              nan     0.0500 -54941.6009
##    280 14614529.8268              nan     0.0500 -77208.1632
##    300 14231771.7511              nan     0.0500 -50215.5932
##    320 13856417.3509              nan     0.0500 -34903.2302
##    340 13422572.1114              nan     0.0500 -27323.5487
##    360 13044072.5054              nan     0.0500 -13513.1734
##    380 12727780.7980              nan     0.0500 -16474.7437
##    400 12396108.2064              nan     0.0500 -18769.3401
##    420 12010571.7686              nan     0.0500 -4777.6989
##    440 11686377.8671              nan     0.0500 -24109.1837
##    460 11426621.8444              nan     0.0500 -22960.6532
##    480 11180922.3045              nan     0.0500 -23011.1410
##    500 10960306.2496              nan     0.0500 -20987.4382

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206380290.3279             nan     0.0500 17201256.0869
##      2 190475384.6483             nan     0.0500 15290766.9236
##      3 175940332.8412             nan     0.0500 14640301.2407
##      4 162733831.6589             nan     0.0500 13066707.0933
##      5 150630460.4886             nan     0.0500 11856656.8335
##      6 139728937.3870             nan     0.0500 11369358.2184
##      7 130462914.5335             nan     0.0500 9602900.5462
##      8 121716346.8279             nan     0.0500 8794430.5624
##      9 114347352.7892             nan     0.0500 7947478.7865
##     10 106910561.0098             nan     0.0500 6454608.8695
##     20 60545570.1600             nan     0.0500 2796463.8237
##     40 33070381.9983             nan     0.0500 505035.7712
##     60 25170184.8141             nan     0.0500 108881.3227
##     80 21684111.8986             nan     0.0500 34231.7474
##    100 19729974.1569             nan     0.0500 11796.9620
##    120 18357316.5528             nan     0.0500 9035.7899
##    140 17165685.5210             nan     0.0500 14749.2978
##    160 16217623.1193             nan     0.0500 -17299.4784
##    180 15313985.1189             nan     0.0500 -50966.6123
##    200 14681071.1536             nan     0.0500 -20304.1244
##    220 13932390.0679             nan     0.0500 -45092.6124
##    240 13295199.8203             nan     0.0500 -23562.5368
##    260 12811009.0321             nan     0.0500 -22933.8817
##    280 12232266.0765             nan     0.0500 -31946.1271
##    300 11829963.4500             nan     0.0500 -31162.3045
##    320 11404221.6861             nan     0.0500 -8291.4489
##    340 11079767.4638             nan     0.0500 -36651.4752
##    360 10656721.8600             nan     0.0500 -20464.1927
##    380 10391780.5201             nan     0.0500 -14084.0562
##    400 10018967.2501             nan     0.0500 -9504.1553
##    420  9700139.3542             nan     0.0500 -19284.9737
##    440  9387847.1090             nan     0.0500 2589.0875
##    460  9120047.4636             nan     0.0500 -28064.9204
##    480  8884094.1743             nan     0.0500 -4711.4947
##    500  8564382.1179             nan     0.0500 -16511.4562

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 206359816.2684             nan     0.0500 18149670.1445
##      2 189723401.1209             nan     0.0500 15151872.0478
##      3 174886005.1345             nan     0.0500 14332375.8242
##      4 162372217.2019             nan     0.0500 12773494.1280
##      5 150368550.4711             nan     0.0500 12387279.5372
##      6 139089728.8880             nan     0.0500 11356795.5992
##      7 128769586.6773             nan     0.0500 10102855.7042
##      8 119999512.2678             nan     0.0500 8804015.8003
##      9 111603746.3257             nan     0.0500 7870025.6556
##     10 104095960.0941             nan     0.0500 7204944.8378
##     20 57791127.0538             nan     0.0500 2682278.3655
##     40 30615330.7538             nan     0.0500 528997.2644
##     60 22946402.4593             nan     0.0500 120100.7589
##     80 19159245.4906             nan     0.0500 26016.4921
##    100 17208150.0233             nan     0.0500 -1021.7092
##    120 15847234.3182             nan     0.0500 -38942.3557
##    140 14745000.0695             nan     0.0500 -7154.6698
##    160 13629756.2535             nan     0.0500 -23107.7433
##    180 12866612.6156             nan     0.0500 -7079.0031
##    200 12167793.8282             nan     0.0500 -33248.2819
##    220 11667375.4119             nan     0.0500 -43185.7736
##    240 11203952.3591             nan     0.0500 -23881.0447
##    260 10721294.2335             nan     0.0500 -14335.8907
##    280 10194755.0461             nan     0.0500 -50522.9231
##    300  9717384.3080             nan     0.0500 -1610.6195
##    320  9324643.9477             nan     0.0500 -34108.0368
##    340  8975490.1304             nan     0.0500 -34463.5837
##    360  8598786.4635             nan     0.0500 -7374.3609
##    380  8190301.2844             nan     0.0500 -19083.9828
##    400  7834485.1650             nan     0.0500 -15116.7556
##    420  7552500.1942             nan     0.0500 -16256.9324
##    440  7290928.3719             nan     0.0500 -19056.8331
##    460  7009740.7536             nan     0.0500 -20841.4051
##    480  6779884.8934             nan     0.0500 -20273.0008
##    500  6530738.8925             nan     0.0500 -26413.0678

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 205408697.7501             nan     0.0500 17923177.9767
##      2 188720325.5051             nan     0.0500 16381000.4819
##      3 173785356.2042             nan     0.0500 14346070.0514
##      4 160188243.5619             nan     0.0500 13299543.7434
##      5 148159914.1967             nan     0.0500 11515821.2983
##      6 136901413.6358             nan     0.0500 11161316.5053
##      7 127051150.5942             nan     0.0500 9705122.5114
##      8 118314570.1769             nan     0.0500 8392986.2404
##      9 109913001.9041             nan     0.0500 8257409.2076
##     10 102653677.8051             nan     0.0500 6659621.4602
##     20 56215265.3456             nan     0.0500 2951494.3415
##     40 28098094.2385             nan     0.0500 395489.4427
##     60 20831863.5846             nan     0.0500 138028.4676
##     80 17679165.9940             nan     0.0500 23045.1955
##    100 15893930.8409             nan     0.0500 -103963.4929
##    120 14524032.7894             nan     0.0500 -14272.1272
##    140 13343315.5408             nan     0.0500 5437.3234
##    160 12511985.7823             nan     0.0500 -44486.7821
##    180 11742493.4805             nan     0.0500 -28499.2799
##    200 11064470.0537             nan     0.0500 -39081.4700
##    220 10317025.9922             nan     0.0500 -49633.0903
##    240  9846944.6845             nan     0.0500 -17356.0892
##    260  9404040.5455             nan     0.0500 -30860.6940
##    280  8883866.7402             nan     0.0500 -21182.5353
##    300  8467380.3919             nan     0.0500 -39528.4092
##    320  8089093.3489             nan     0.0500 -2916.0587
##    340  7752670.0061             nan     0.0500 -16063.4798
##    360  7424715.9517             nan     0.0500 -30172.4909
##    380  7107446.2989             nan     0.0500 -8516.1935
##    400  6794626.3746             nan     0.0500 -21051.1667
##    420  6459083.2543             nan     0.0500 -28590.7012
##    440  6188872.3131             nan     0.0500 -25686.0378
##    460  5953412.8679             nan     0.0500 -16600.2999
##    480  5721164.0962             nan     0.0500 -30865.7846
##    500  5504280.3473             nan     0.0500 -19438.4389
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 195746330.2010             nan     0.1000 29456164.3804
##      2 172410748.0906             nan     0.1000 23572092.5940
##      3 152040699.1334             nan     0.1000 20720087.6725
##      4 135870316.5100             nan     0.1000 16713446.8348
##      5 122044798.8110             nan     0.1000 13792076.2978
##      6 111536273.3892             nan     0.1000 11317445.1944
##      7 102083166.0484             nan     0.1000 9310559.5047
##      8 93812448.1030             nan     0.1000 7141696.7389
##      9 87085418.1609             nan     0.1000 6882752.4260
##     10 80831980.9859             nan     0.1000 4496150.8767
##     20 50787054.4393             nan     0.1000 918492.4203
##     40 34098794.2600             nan     0.1000 280200.0339
##     60 29390689.9014             nan     0.1000 315149.7148
##     80 26959818.9748             nan     0.1000 10600.3479
##    100 25549887.6528             nan     0.1000 -19489.3487
##    120 24474082.8425             nan     0.1000 -24530.0036
##    140 23274780.4958             nan     0.1000 -22386.7366
##    160 22423834.4811             nan     0.1000 -62930.6023
##    180 21798491.2032             nan     0.1000 -140408.7400
##    200 21062184.4471             nan     0.1000 -3372.2304
##    220 20524598.2943             nan     0.1000 -62049.6491
##    240 19887285.7251             nan     0.1000 -47044.0467
##    260 19283529.7691             nan     0.1000 -29400.0741
##    280 18606977.5111             nan     0.1000 -46237.6299
##    300 18224596.6468             nan     0.1000 -21402.9779
##    320 17825805.3137             nan     0.1000 -107383.6226
##    340 17419654.7832             nan     0.1000 -20997.2525
##    360 17051980.6628             nan     0.1000 -67110.9992
##    380 16744548.0905             nan     0.1000 -32282.5676
##    400 16418741.7589             nan     0.1000 -113604.6629
```

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##    420 16046351.8761             nan     0.1000 -30612.8340
##    440 15694489.0774             nan     0.1000 -38390.3125
##    460 15410190.6561             nan     0.1000 -55138.4928
##    480 15196913.1893             nan     0.1000 -36108.9351
##    500 14944032.6578             nan     0.1000 -63375.5335

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191931572.2356             nan     0.1000 32431344.5700
##      2 165548369.1935             nan     0.1000 27018981.6317
##      3 143581517.1678             nan     0.1000 20192650.6359
##      4 126650493.2371             nan     0.1000 17472118.7773
##      5 111787770.9455             nan     0.1000 13937201.0221
##      6 100266350.7066             nan     0.1000 11905946.8109
##      7 90488912.0959             nan     0.1000 9513002.9393
##      8 82355606.2555             nan     0.1000 7372683.3053
##      9 75407669.2125             nan     0.1000 6291466.2206
##     10 69199341.5223             nan     0.1000 6035607.4449
##     20 40952159.5322             nan     0.1000 1555107.9255
##     40 28286760.1522             nan     0.1000 -20855.2021
##     60 24458988.1487             nan     0.1000 -293688.3913
##     80 22230088.2102             nan     0.1000 -32747.4001
##    100 20821831.5538             nan     0.1000 -39518.5711
##    120 19417414.0268             nan     0.1000 -116147.3013
##    140 18092236.2563             nan     0.1000 -18434.2598
##    160 17138262.6817             nan     0.1000 -15198.9923
##    180 16248263.6912             nan     0.1000 -53315.9597
##    200 15667424.6697             nan     0.1000 -41113.3232
##    220 15023797.8424             nan     0.1000 -88140.1533
##    240 14486134.8802             nan     0.1000 -55740.8006
##    260 13753212.3570             nan     0.1000 -4588.8210
##    280 13279699.6406             nan     0.1000  141.7098
```

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##    300 12695941.9464             nan     0.1000 -39957.3972
##    320 12185150.0664             nan     0.1000 -26784.1544
##    340 11665987.4955             nan     0.1000 -47750.5029
##    360 11224965.4958             nan     0.1000 -15903.7581
##    380 10939783.8061             nan     0.1000 -45274.4955
##    400 10635815.1750             nan     0.1000 -26450.5011
##    420 10327350.3160             nan     0.1000 -18090.2122
##    440 10097338.8279             nan     0.1000 -21961.0951
##    460  9819949.0655             nan     0.1000 -31962.2173
##    480  9471786.1980             nan     0.1000 -102875.2404
##    500  9205265.7377             nan     0.1000 -28963.8840

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 191012513.9785             nan     0.1000 32982320.7439
##      2 163682574.6296             nan     0.1000 27382832.5619
##      3 141757927.9806             nan     0.1000 22086586.5814
##      4 124387249.1648             nan     0.1000 18635630.1735
##      5 108419414.3115             nan     0.1000 16006534.8162
##      6 95408932.2876             nan     0.1000 12017939.9675
##      7 85342869.9482             nan     0.1000 9775515.6798
##      8 76725827.9376             nan     0.1000 8589339.3899
##      9 69415628.1886             nan     0.1000 7074063.3817
##     10 63494467.9095             nan     0.1000 5154276.2076
##     20 36562401.2745             nan     0.1000 1052790.1763
##     40 24661042.9268             nan     0.1000 -75393.1644
##     60 21355915.2917             nan     0.1000 3603.7787
##     80 19114047.8350             nan     0.1000 -24591.9664
##    100 17546874.2625             nan     0.1000 -33358.5697
##    120 15954799.2774             nan     0.1000 12375.8506
##    140 14837407.5204             nan     0.1000 -97737.5754
##    160 14052292.5879             nan     0.1000 -35312.8121
```

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##    180 13319169.6722             nan     0.1000 -46018.9516
##    200 12561010.7761             nan     0.1000 -68873.3254
##    220 11746139.2443             nan     0.1000 -37385.2338
##    240 11227593.0259             nan     0.1000 -18092.0326
##    260 10606330.3884             nan     0.1000 -28821.6467
##    280 10219645.8915             nan     0.1000 -57024.3976
##    300  9802094.0346             nan     0.1000 -31914.9093
##    320  9432327.4084             nan     0.1000 -45830.4662
##    340  9040210.7633             nan     0.1000 -15481.1608
##    360  8640091.2375             nan     0.1000 -38455.0572
##    380  8352063.8084             nan     0.1000 -74209.1289
##    400  8067136.4212             nan     0.1000 -52400.8960
##    420  7731408.3406             nan     0.1000 -57152.2549
##    440  7362622.4628             nan     0.1000 3349.8757
##    460  7101701.9359             nan     0.1000 -29830.1372
##    480  6854284.8228             nan     0.1000 -25345.5015
##    500  6655379.8793             nan     0.1000 -43888.7001

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 190545179.3602             nan     0.1000 34512814.4253
##      2 162118170.5765             nan     0.1000 26827053.6774
##      3 138238753.9207             nan     0.1000 22446178.6509
##      4 119475484.9181             nan     0.1000 18373511.0856
##      5 104226801.3651             nan     0.1000 15388546.7283
##      6 91674867.7355             nan     0.1000 12802135.8409
##      7 81048761.7410             nan     0.1000 9876901.2764
##      8 72115033.5646             nan     0.1000 8673855.9835
##      9 64864402.1638             nan     0.1000 5764146.7265
##     10 59404077.6124             nan     0.1000 4973941.0482
##     20 32332135.4678             nan     0.1000 836631.4814
##     40 21796305.7289             nan     0.1000 23543.8402
```

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##     60 18594514.8644             nan     0.1000 8587.7459
##     80 16509778.2619             nan     0.1000 -59828.1144
##    100 14948129.8695             nan     0.1000 -41106.7419
##    120 13351038.8414             nan     0.1000 -248243.0266
##    140 12184805.4848             nan     0.1000 -58308.0608
##    160 11454931.2580             nan     0.1000 -12554.5169
##    180 10603619.2414             nan     0.1000 -68005.2863
##    200  9776849.2080             nan     0.1000 -26866.8400
##    220  9171514.7938             nan     0.1000 -45892.1714
##    240  8502776.0987             nan     0.1000 -41915.9424
##    260  8041256.5955             nan     0.1000 -16494.3838
##    280  7624832.7202             nan     0.1000 -34221.1321
##    300  7248274.1023             nan     0.1000 -21625.5940
##    320  6906212.9651             nan     0.1000 -50175.1599
##    340  6589774.1905             nan     0.1000 -32693.9714
##    360  6276201.9591             nan     0.1000 -17405.0370
##    380  5998523.7785             nan     0.1000 -33867.6406
##    400  5766187.8153             nan     0.1000 -21360.6547
##    420  5506809.8873             nan     0.1000 -16794.1985
##    440  5282784.9834             nan     0.1000 -23281.4419
##    460  5104809.9517             nan     0.1000 -23543.3984
##    480  4929885.2950             nan     0.1000 -8378.3577
##    500  4746190.0824             nan     0.1000 -16679.5635

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.

## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188415694.5196             nan     0.1000 35019363.2086
##      2 160193160.8325             nan     0.1000 27038978.0269
##      3 136957706.1373             nan     0.1000 21516699.1843
##      4 117213358.5017             nan     0.1000 18206092.4249
##      5 102108626.8090             nan     0.1000 14120068.3165
##      6 89385355.1070             nan     0.1000 12142480.0625
```

```
##      7 79257062.4833            nan     0.1000 10315418.1096
##      8 69883212.5816            nan     0.1000 9074884.6423
##      9 63027589.3273            nan     0.1000 6474383.3549
##     10 56870754.4918            nan     0.1000 5415672.5689
##     20 30505223.8858            nan     0.1000 816158.4331
##     40 20150966.3046            nan     0.1000 67741.3449
##     60 16704964.9644            nan     0.1000 -17659.9996
##     80 14844225.5949            nan     0.1000 -102947.4310
##    100 13179624.4355            nan     0.1000 -63131.4018
##    120 11742169.8388            nan     0.1000 -37950.9095
##    140 10652953.8947            nan     0.1000 -30156.2816
##    160  9796693.5027            nan     0.1000 -16746.0625
##    180  9033502.8254            nan     0.1000 -90660.2405
##    200  8373227.0970            nan     0.1000 -71636.1578
##    220  7839101.5312            nan     0.1000 -32098.4030
##    240  7338514.0950            nan     0.1000 -28055.7508
##    260  6915233.2195            nan     0.1000 -50611.4895
##    280  6528121.4803            nan     0.1000 -31847.8811
##    300  6158492.0469            nan     0.1000 -29161.5047
##    320  5800753.6950            nan     0.1000 -41305.3532
##    340  5466333.3100            nan     0.1000 -67333.8163
##    360  5153835.9690            nan     0.1000 -35976.7819
##    380  4896967.4348            nan     0.1000 -62959.3614
##    400  4655972.3855            nan     0.1000 -3682.6210
##    420  4382473.4969            nan     0.1000 -10008.2384
##    440  4198587.1209            nan     0.1000 -26618.8337
##    460  4005389.5580            nan     0.1000 -22524.7604
##    480  3795363.7313            nan     0.1000 -16722.2673
##    500  3659569.3425            nan     0.1000 -30378.3001

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 188118157.8638             nan     0.1000 37182368.3951
##      2 159520185.6288             nan     0.1000 30258276.0017
##      3 136019951.3200             nan     0.1000 24442072.7286
##      4 117233425.3728             nan     0.1000 18637222.4871
##      5 101240016.5137             nan     0.1000 15525590.2780
##      6 88338596.9340             nan     0.1000 12329699.1514
##      7 77927269.2882             nan     0.1000 9815495.6340
##      8 69882540.3432             nan     0.1000 7537043.1980
##      9 62336111.9119             nan     0.1000 6991135.7106
##     10 55626794.1622             nan     0.1000 5503667.7674
##     20 28402376.0262             nan     0.1000 995542.8096
##     40 17735919.0908             nan     0.1000 67494.0058
##     60 14631609.9932             nan     0.1000 -5041.5334
##     80 12838669.0990             nan     0.1000 -16324.7032
##    100 11313568.7094             nan     0.1000 -1488.1038
##    120 10110767.9785             nan     0.1000 -84642.0983
##    140  9104573.0471             nan     0.1000 -147191.0413
##    160  8246115.9295             nan     0.1000 -29686.0332
##    180  7515282.2569             nan     0.1000 -36674.0605
##    200  6839674.9752             nan     0.1000 -51529.6250
##    220  6402365.5983             nan     0.1000 -81597.9263
##    240  5950975.1447             nan     0.1000 -19825.5240
##    260  5534447.6975             nan     0.1000 -35974.1433
##    280  5108990.8878             nan     0.1000 -49491.7260
##    300  4812007.4585             nan     0.1000 -36044.9100
##    320  4523931.9993             nan     0.1000 -33779.9953
##    340  4191676.2316             nan     0.1000 -37245.0016
##    360  3973483.6006             nan     0.1000 -32368.2004
##    380  3742389.3946             nan     0.1000 -36882.2630
##    400  3519109.7958             nan     0.1000 -16751.7476
##    420  3337492.4189             nan     0.1000 -24495.9528
##    440  3128835.8972             nan     0.1000 -11310.5404
##    460  2950528.7827             nan     0.1000 -7687.2724
##    480  2780443.4354             nan     0.1000 -35225.1835
##    500  2627629.8511             nan     0.1000 -12808.1462

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 5: manufacturerchrysler has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 10: manufacturergmc has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 21: manufacturermini has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 25: manufacturerporsche has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 32: conditionsalvage has no variation.

## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 39: title_statussalvage has no variation.
```

```
## Warning in (function (x, y, offset = NULL, misc = NULL, distribution =
## "bernoulli", : variable 87: stateme has no variation.
```

```
## Iter   TrainDeviance   ValidDeviance   StepSize   Improve
##      1 187331829.1588             nan     0.1000 34782988.1812
##      2 158775407.0670             nan     0.1000 26791117.6753
##      3 134998230.4068             nan     0.1000 22958111.7392
##      4 116527255.3641             nan     0.1000 17282842.1312
##      5 101262298.3796             nan     0.1000 14533229.2168
##      6 88273017.8061             nan     0.1000 12589318.2161
##      7 77884507.3905             nan     0.1000 10125544.0365
##      8 68750946.5259             nan     0.1000 8654646.3883
##      9 61473095.1088             nan     0.1000 6972539.0139
##     10 55211857.3700             nan     0.1000 5481169.3103
##     20 29224316.2837             nan     0.1000 804667.3000
##     40 19623609.7459             nan     0.1000 -42584.3627
##     60 16396133.9359             nan     0.1000 -94164.8397
##     80 14514731.4455             nan     0.1000 -6722.9666
##    100 12909644.8472             nan     0.1000 -76665.8588
##    120 11523607.4307             nan     0.1000 -95742.0244
##    140 10288359.5642             nan     0.1000 19714.9960
##    160  9444753.2568             nan     0.1000 -47738.9329
##    180  8583772.8733             nan     0.1000 -81874.0735
##    200  7866149.3900             nan     0.1000 -39734.5320
##    220  7269912.6990             nan     0.1000 -48843.2230
##    240  6763024.4148             nan     0.1000 -33830.7105
##    260  6306646.3091             nan     0.1000 -23078.3379
##    280  5807727.9775             nan     0.1000 -65231.5329
##    300  5441701.8608             nan     0.1000 -33504.7953
##    320  5110608.8101             nan     0.1000 -26634.3715
##    340  4826431.0261             nan     0.1000 -23088.7834
##    360  4537836.1052             nan     0.1000 -46659.7454
##    380  4304305.1202             nan     0.1000 -23862.5796
##    400  4064422.0650             nan     0.1000 -30862.1810
##    420  3815922.8914             nan     0.1000 -19349.8605
##    440  3629703.4449             nan     0.1000 -30939.2122
##    460  3440463.1092             nan     0.1000 -37290.1515
##    480  3279430.8542             nan     0.1000 -13682.2823
##    500  3149293.7420             nan     0.1000 -27615.4381
```

```
## [1] 7
```

There are several parameters in the GBM model. *num of trees* controls the number of estimators/base-trees in the ensemble model.*interaction depth* is similar to *max tree depth* in the Regression Tree, it determines the highest level of variable interactions allowed while training the model. *shrinkage* is considered as the learning rate. It is used for reducing, the impact of each additional fitted base-tree. For *num of trees* and *interaction depth*, small value may cost underfitting and the bigger one can result in overfitting while *shrinkage* does just the opposite.

Set the range for *num of trees* to be 200 to 500 with step of 100, the range for *interaction depth* to be 2 to 7 with step of 1 and *shrinkage* to be 0.05 or 0.1. The best-tune *num of trees* is 500, *interaction depth* 7 is and *shrinkage* is 0.1

Important variables

Model performance

```
set.seed(777)
res =
  resamples(list(LASSO = lasso.fit,
                 TREE = tree.fit,
                 GBM = gbm.train))

cv_res = res$values
p1 =
  cv_res %>%
    as.tibble() %>%
    select('LASSO~RMSE', 'TREE~RMSE', 'GBM~RMSE') %>%
    pivot_longer(c('LASSO~RMSE', 'TREE~RMSE', 'GBM~RMSE'),
                 names_to = 'model',
                 values_to = 'RMSE') %>%
    mutate(
      model = ifelse(model=='LASSO~RMSE', 'LASSO', model),
      model = ifelse(model=='TREE~RMSE', 'TREE', model),
      model = ifelse(model=='GBM~RMSE', 'GBM', model),
      model = as.factor(model),
      model = fct_reorder(model, -RMSE, median)
    ) %>%
    ggplot(aes(x=model, y=RMSE, fill = model)) + geom_boxplot()
```

```
## Warning: `as.tibble()` was deprecated in tibble 2.0.0.
## Please use `as_tibble()` instead.
## The signature and semantics have changed, see `?as_tibble`.
```

```
pred_y = predict(lasso.fit, newdata = as.tibble(test_df))
rmse = sqrt(mean((pred_y - test_df$price)^2))

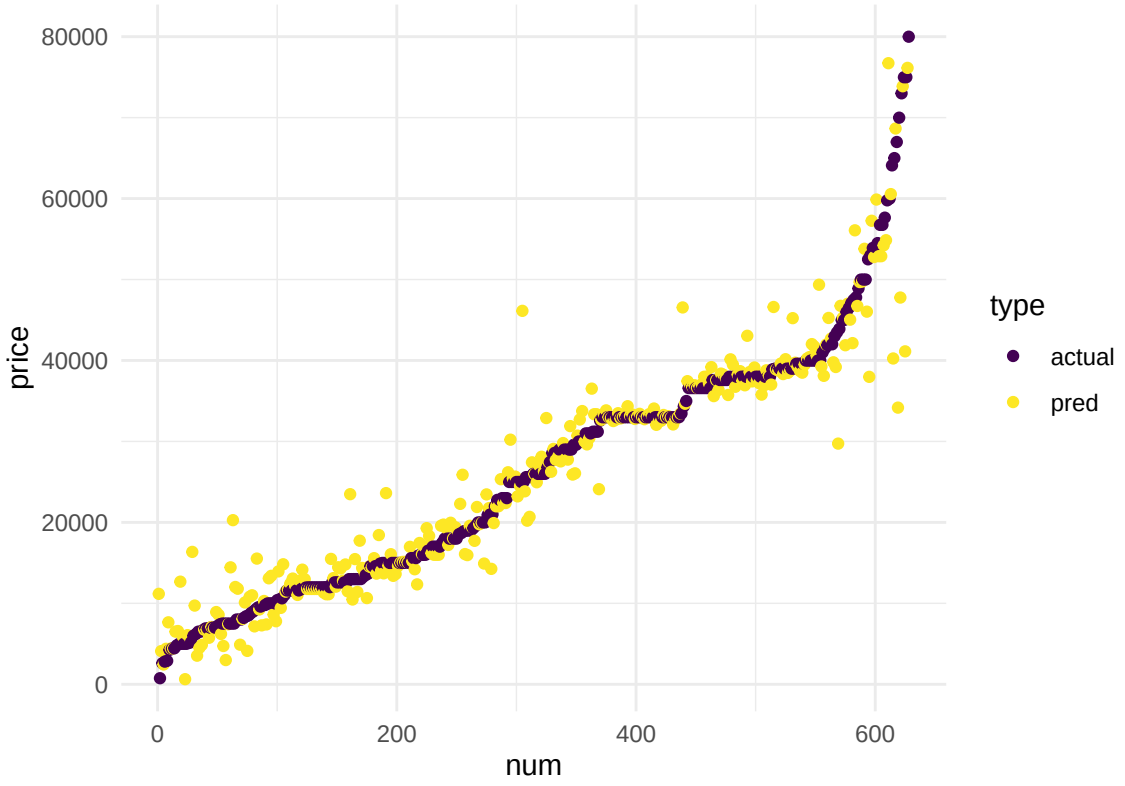
pred_y = predict(tree.fit, newdata = as.tibble(test_df))
rmse = sqrt(mean((pred_y - test_df$price)^2))

pred_y = predict(gbm.train, newdata = as.tibble(test_df))
rmse = sqrt(mean((pred_y - test_df$price)^2))


y_compare_df =
  tibble(pred = pred_y,
         actual = test_df$price) %>%
  arrange(actual) %>%
    pivot_longer(
      cols = pred:actual,
      names_to = 'type',
      values_to = 'price'
    )

y_compare_df %>%
```

```
mutate(
  num = seq(1, nrow(y_compare_df)),
  type = as.factor(type)
       ) %>%
ggplot(aes(x = num, y = price), color = type) +
geom_point(aes(colour = type)) +
theme(legend.position="right")
```



Model Limitations

Conclusions

Appendix