PREDICTING CAR PRICES

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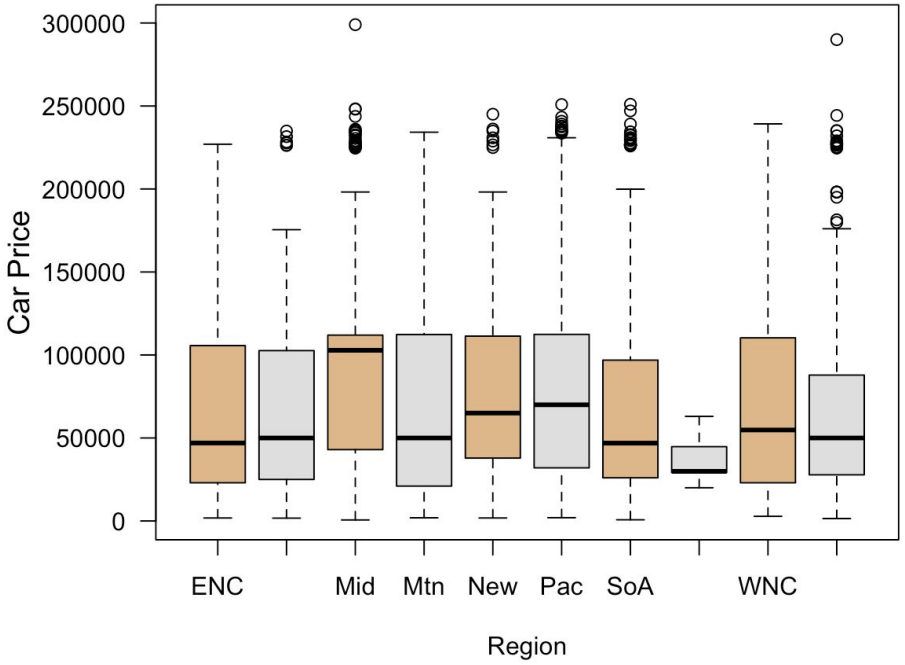
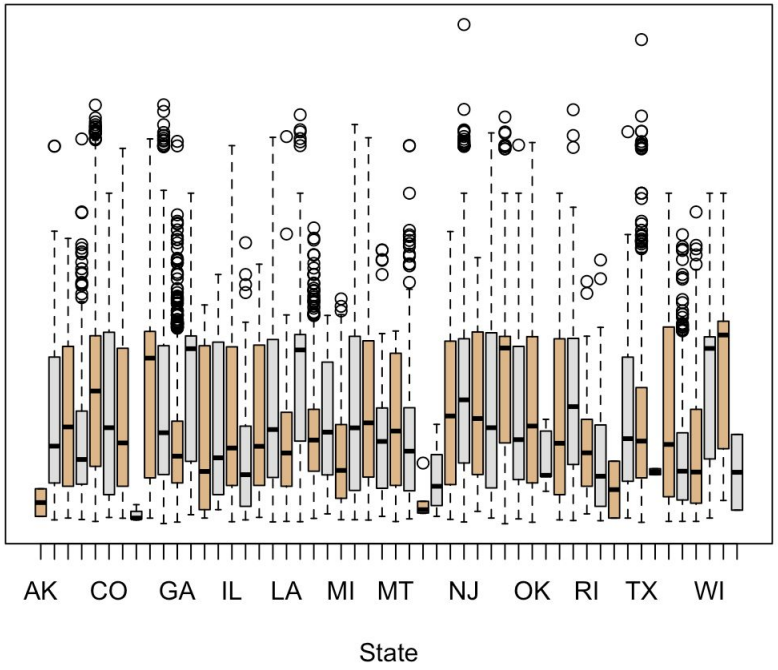
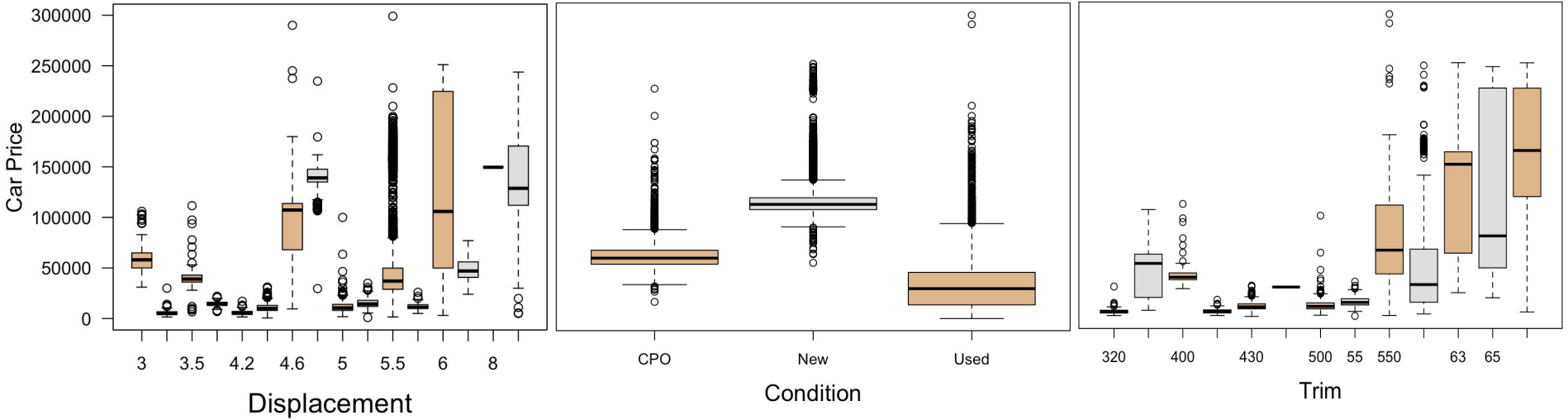
INITIAL DATA ANALYSIS



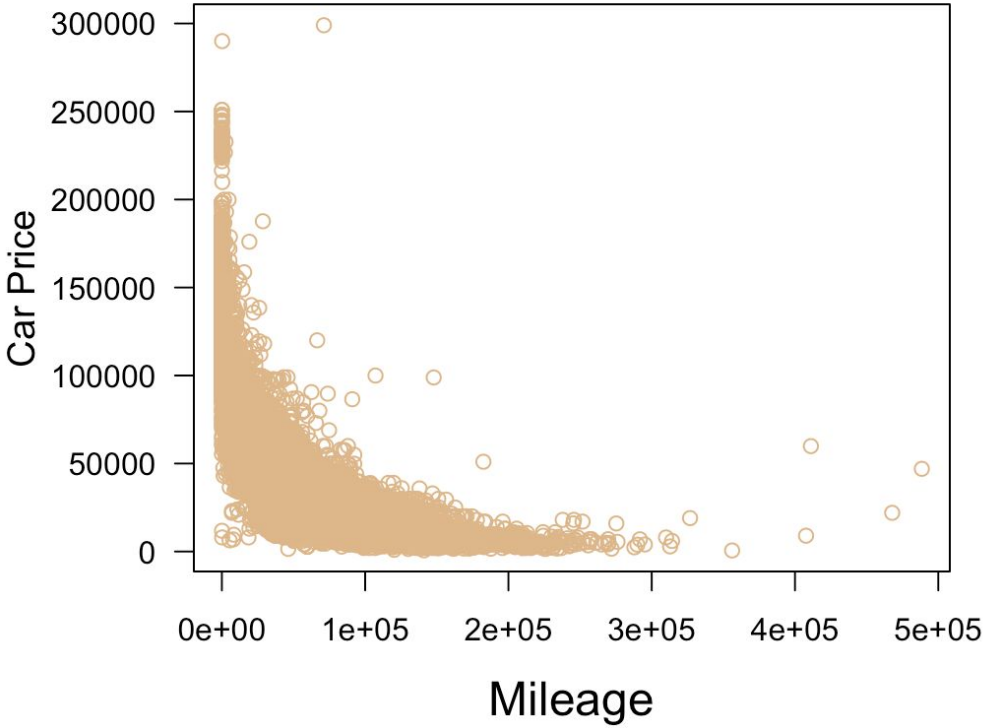


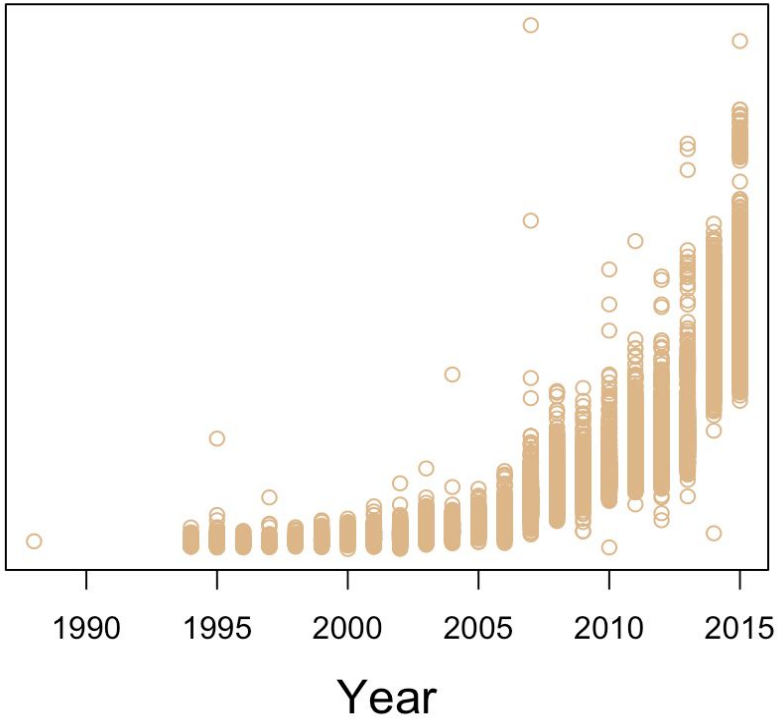
SubTrim was also dropped because of low variability

INITIAL DATA ANALYSIS

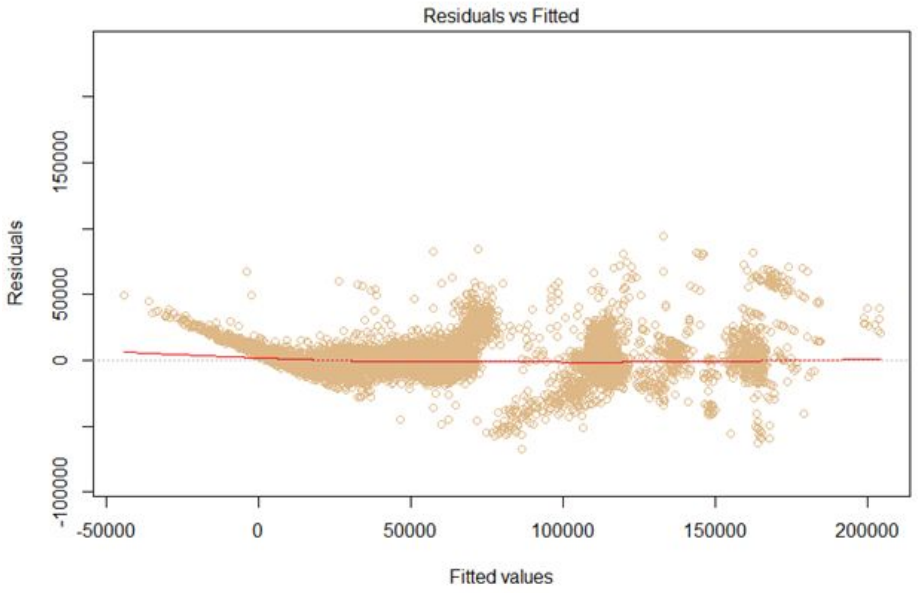


INITIAL DATA ANALYSIS

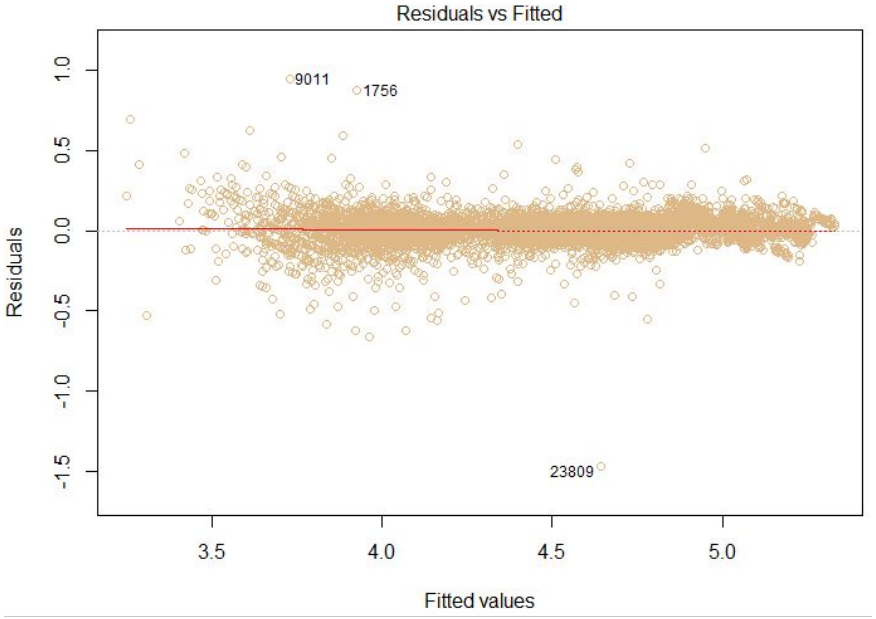




LINEAR MODELS



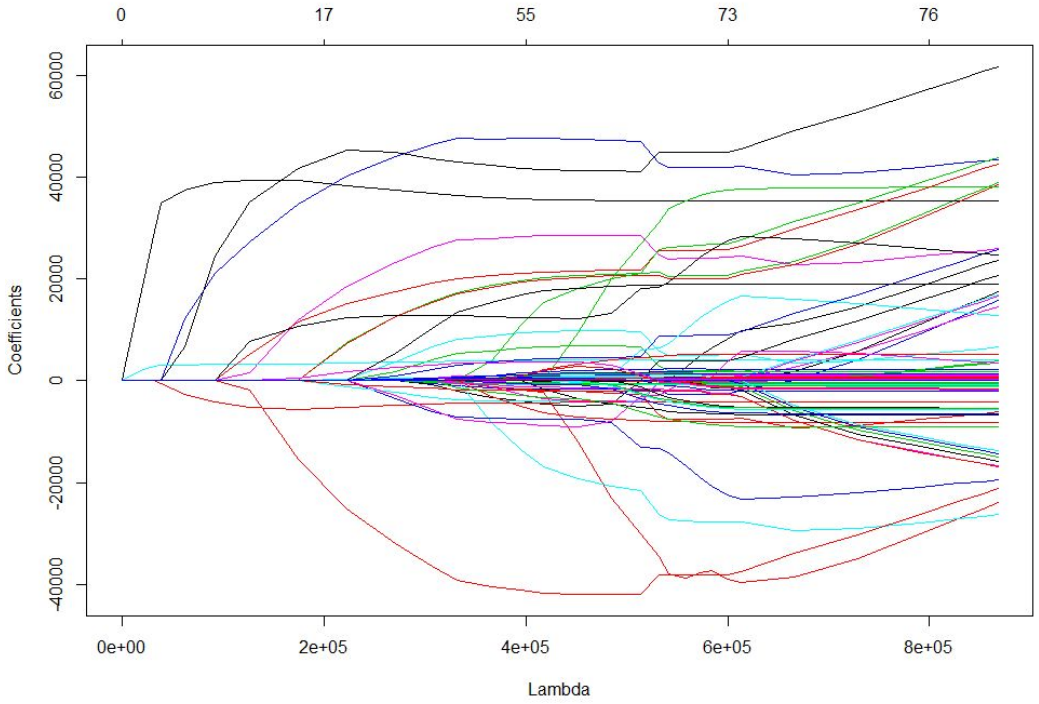
Price vs. All Variables



log*(Price) vs. All Variables*

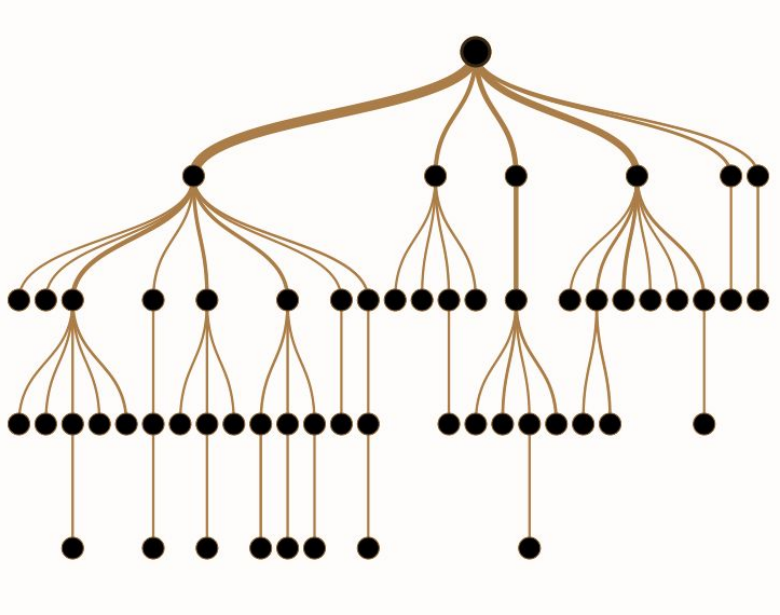
LINEAR MODELS

- Color
  - Black
- Displacement
  - 5
  - 5.4
  - 5.5
- Trim
  - 55
  - 350
- Sound System
  - Boston Acoustic
  - Premium



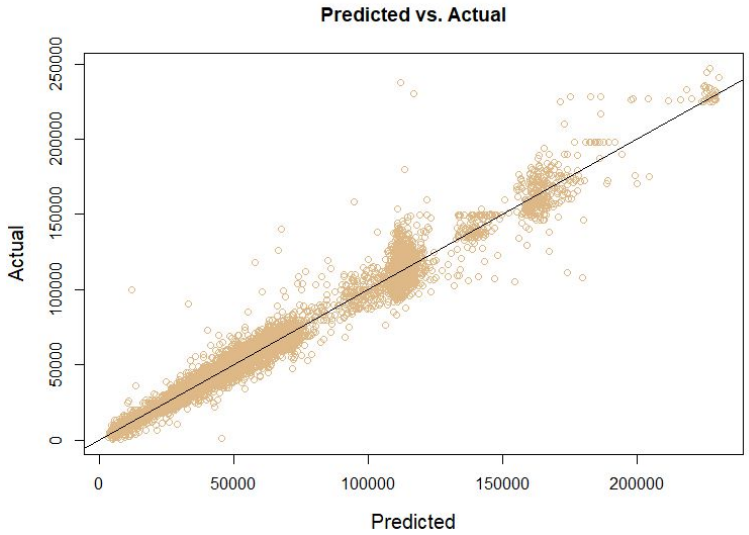
TREES

- Training Set vs. Test Set
  - 70/30
- Random Forest
  - *N* Number of Trees
  - *M* Number of Variables
  - Node Size
- Bagging
  - *N* Number of Trees
  - Node Size
- Boosting
  - *N* Number of Trees
  - Shrinkage Parameter
  - Interaction Depth

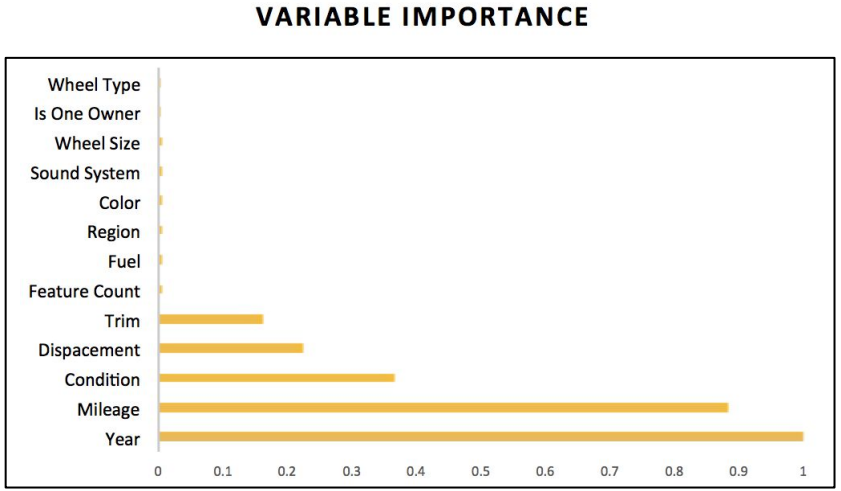


RESULTS

- RandomForest
  - Number of *n* trees = 200
  - Number of *m* variables = 6
  - Node size = 20



- RMSE
  - $6,688.96



INSIGHTS

- Random Forest vs. OLS
- Why RMSE?
- Limitations
  - Heteroskedasticity
  - Not randomly distributed