Predicting Vehicle Value

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Meet Mike.

He’s selling his 2013 sedan.

After visiting many stores, looking online, and speaking with many salesmen, Mike was left feeling confused!

Story for illustration purposes only

How much can you sell your car for?

How much is a potential purchase actually worth?

By plugging in numbers to the regression model, any consumer vehicles' value can be predicted with a MAE of $800.

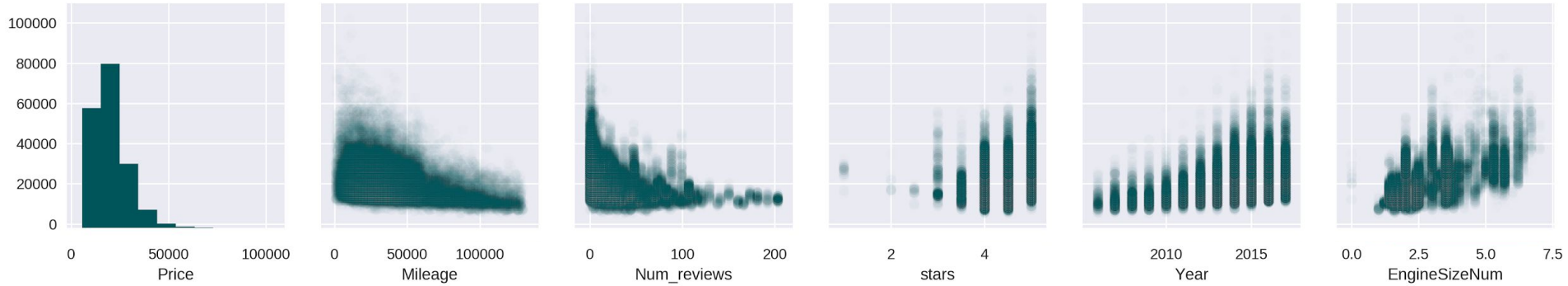
Year + Make + Model + Mileage + Color + Location + Tech Specs + Popularity =

Vehicle Value

1. Getting Data

It was essential to get a wide range of car models with many features for each.

- ➔ **www.carmax.com**
  Using selenium, information on over 51,000 vehicles was saved locally.
- ➔ This was subsequently parsed to ensure no network-loss glitches in scraping.



All features show a strongly linear relationship to price.

Feature Engineering + Modeling

Linear Regression yielded R^2=.944

RMSE=$1989

Gradient Boosting yielded R^2=.916

RMSE=$2442

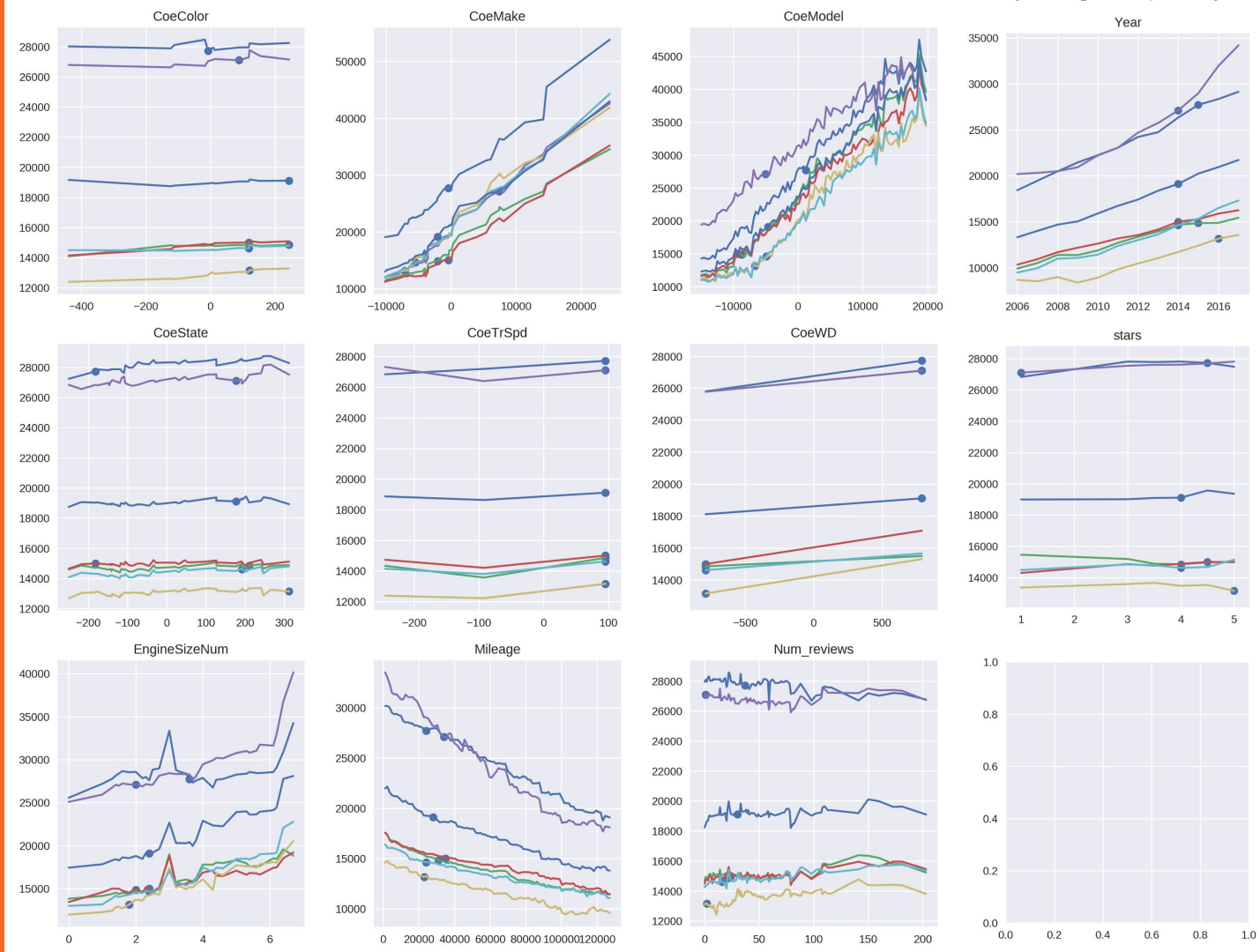
GB+Linear Regression Coefficients yielded R^2=.982

RMSE=$1108

Year	1038
Num Stars	629
Color (Black)	$243
Location (CA)	$192
Engine Size	125
Num Reviews	10.2
Mileage	-0.065

pip install ml-insights

A vehicles' theoretical price vs. the full-spectrum of each feature.



Then, Mike discovered CarPricePredictor.com

By easily putting in his car's features, he was given a simple, easy to understand number: his car's market value.

Now Mike knows what to expect from car dealers and has the data to negotiate a higher price.

Doesn't Mike look happy?