

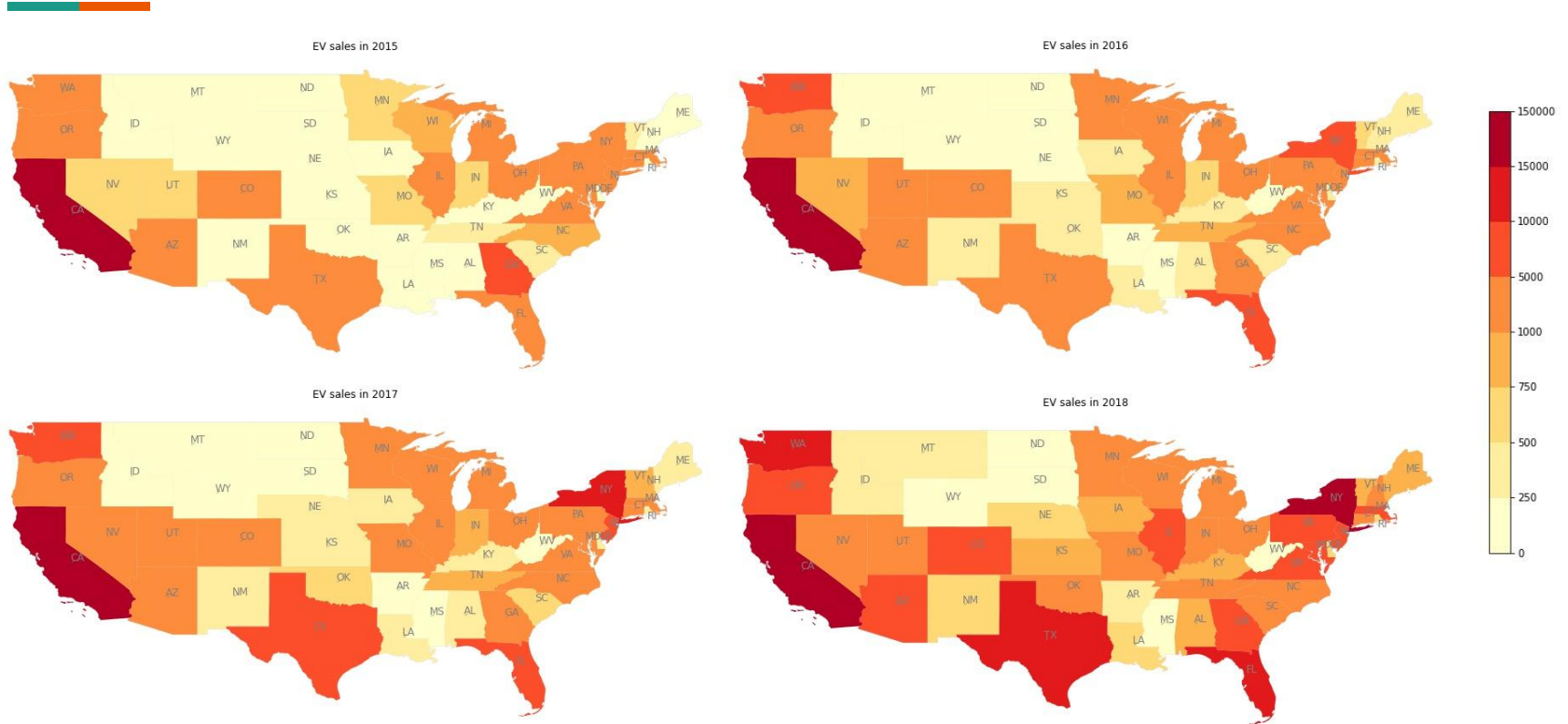


Driving factors in Electric Vehicle Adoption in the US

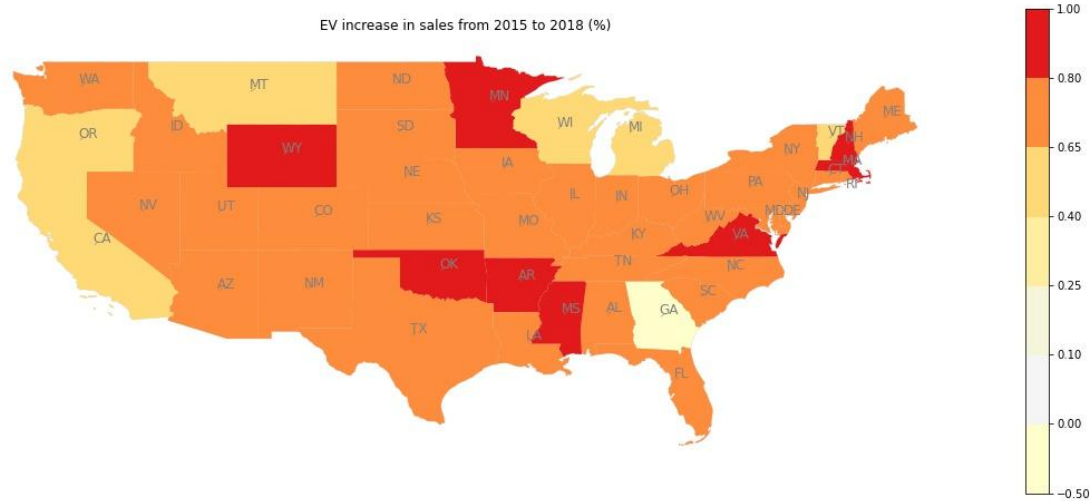
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EV Adoption in the US 2015-2018



EV Adoption in the US 2015-2018



The Problem

- Increasing growth in EV vehicle adoption across the US
- Some states are seeing higher adoption rates than others
 - Why's that?
 - What are the factors that drive EV adoption?
 - Initial guesses: outlet & charging locations, gas prices and temperature
 - Do they make sense?
 - Can we predict which states will see highest adoption next?



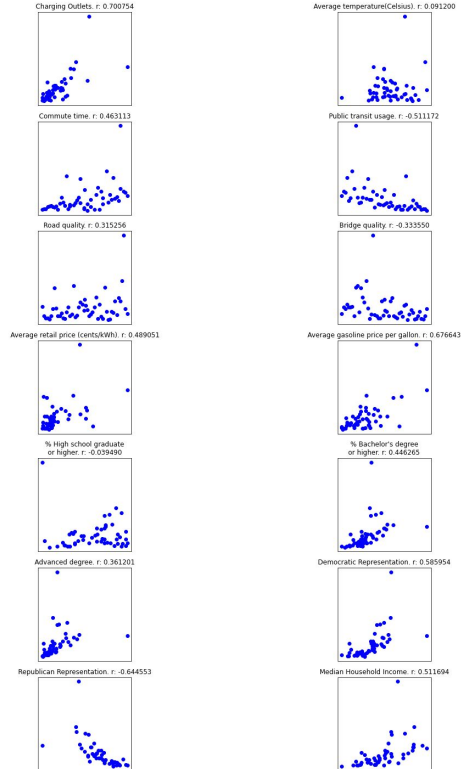
The Approach

- Decided to look at a plethora of features such as:
 - Available charging stations,
 - Gas and electricity price,
 - Road quality,
 - Average education level,
 - State purchase incentives,
 - Political orientation,
 - Etc.
- Goal: Identify which ones are most highly correlated with EV adoption

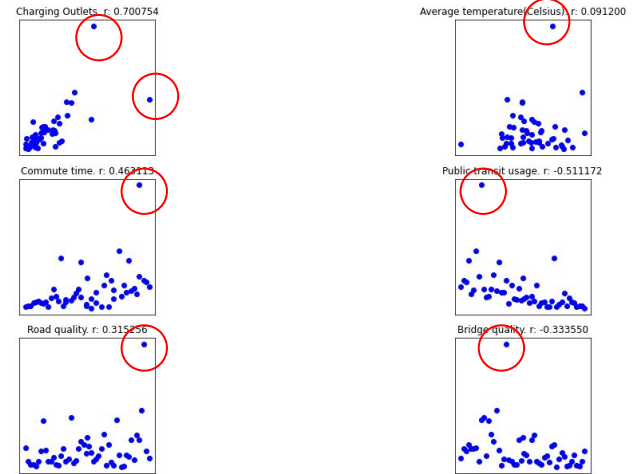


Correlation Analysis

Correlation with Average EV Sales



Correlation with Average EV Sales

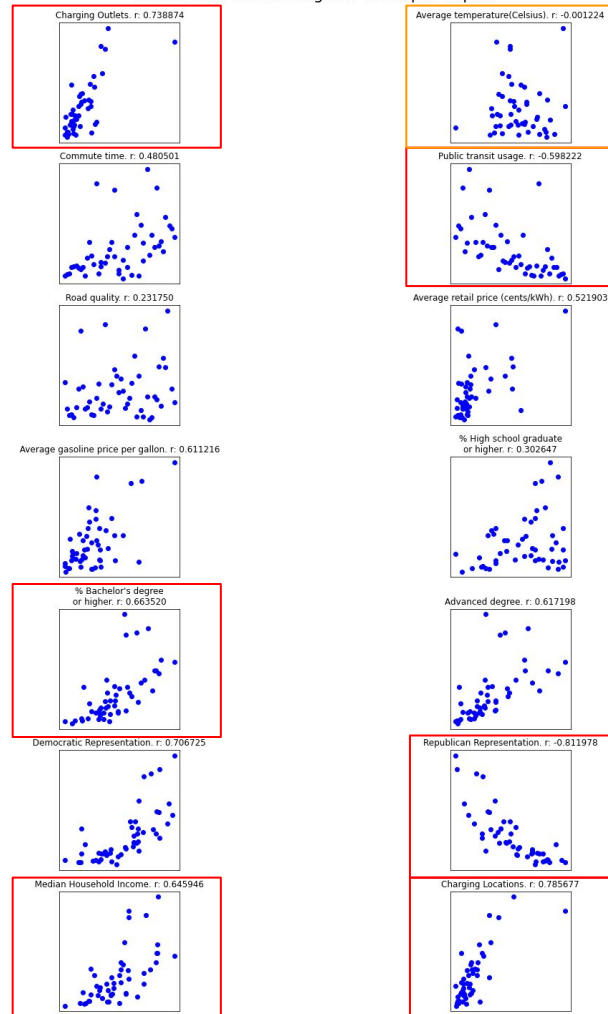


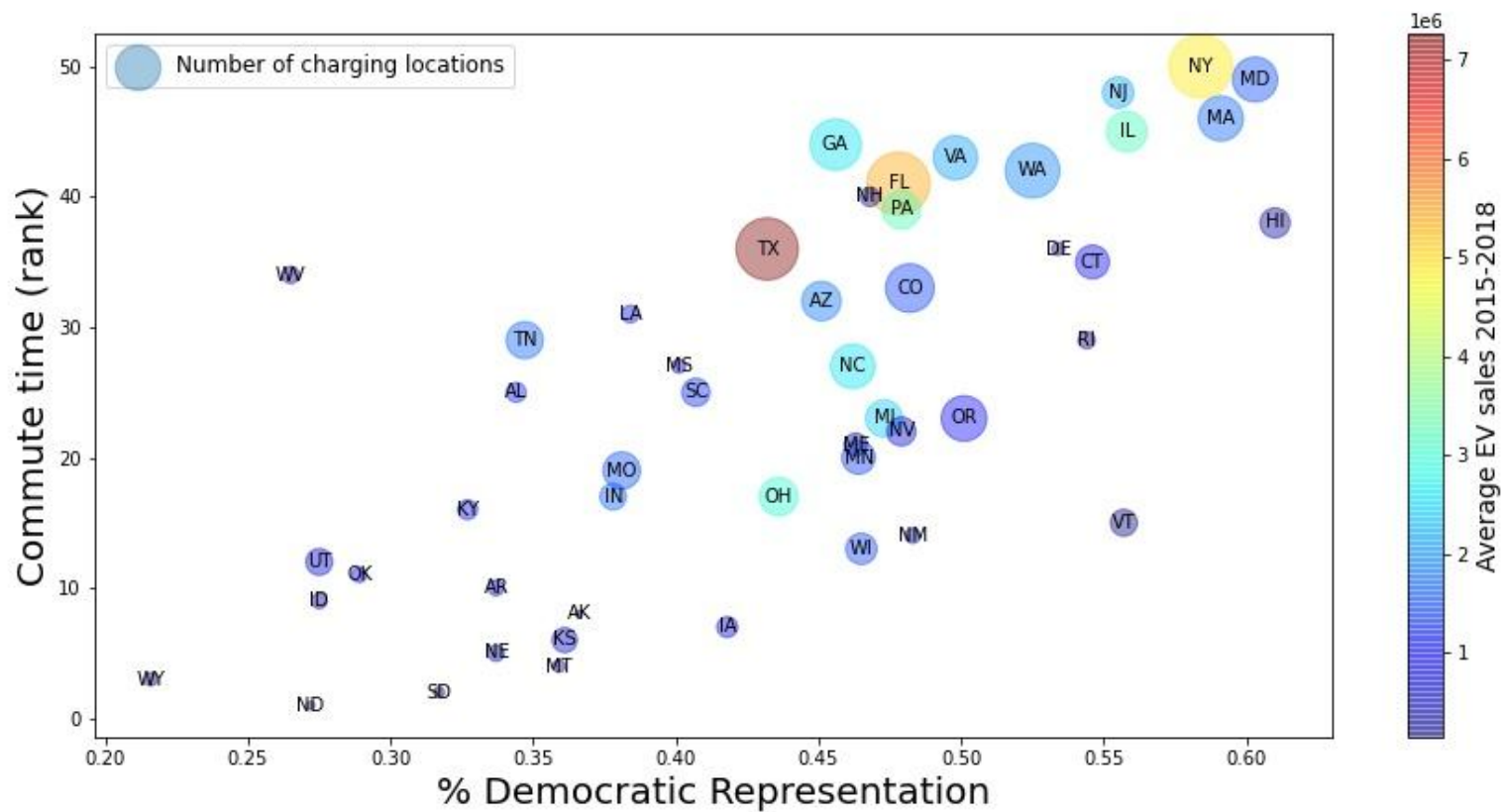
WE FOUND OUTLIERS!
(CA & DC)

Correlation Analysis

- Most Correlated:
 - Charging Outlets & Locations
 - Public Transit Usage
 - Bachelor's Degree
 - Median Household Income
 - Republican/Democratic Representation
- Uncorrelated: Temperature (!)

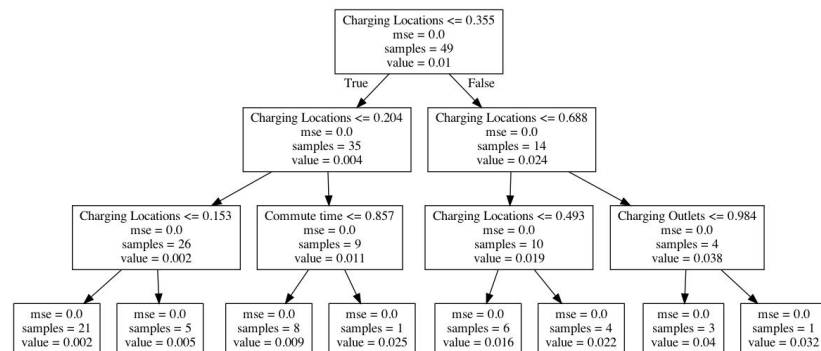
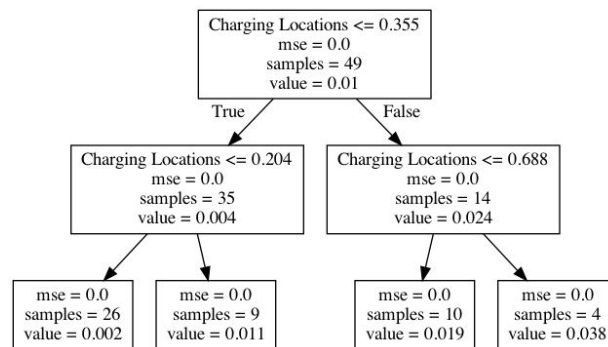
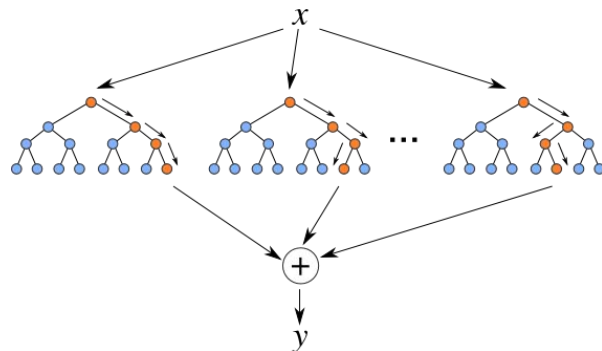
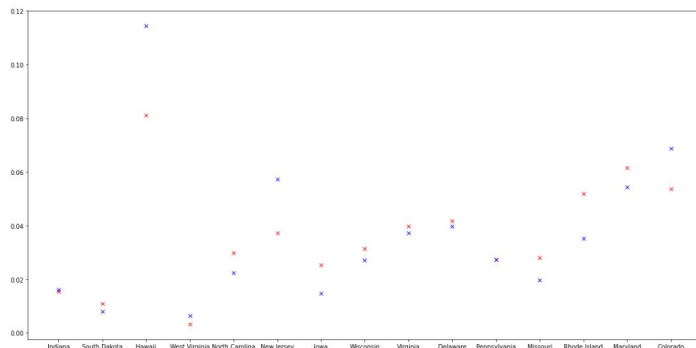
Correlation with Average EV Sales per Capita



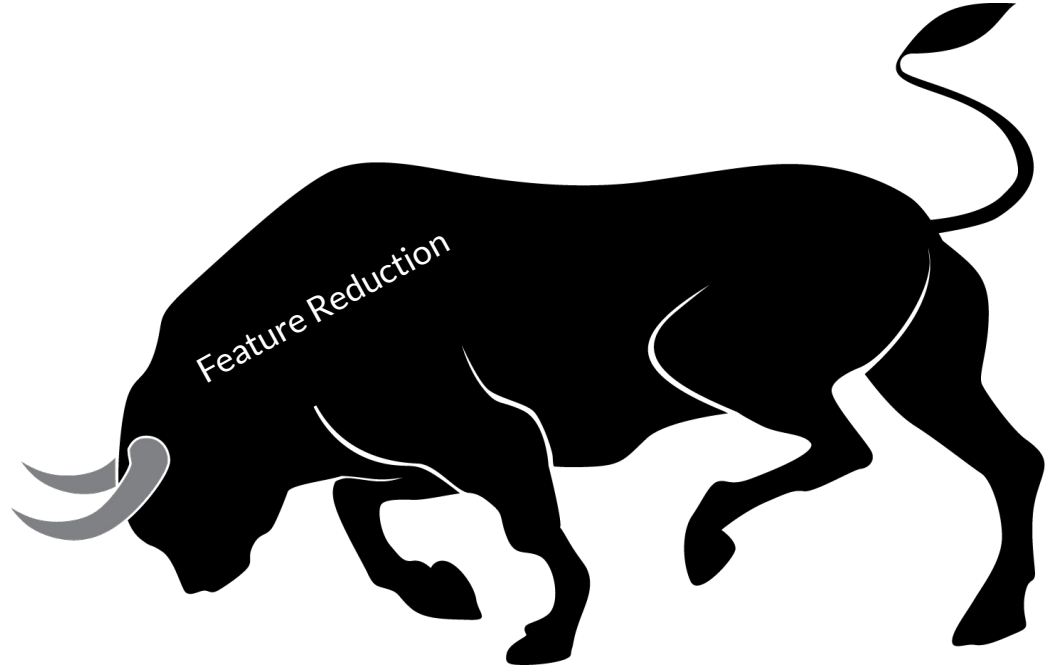
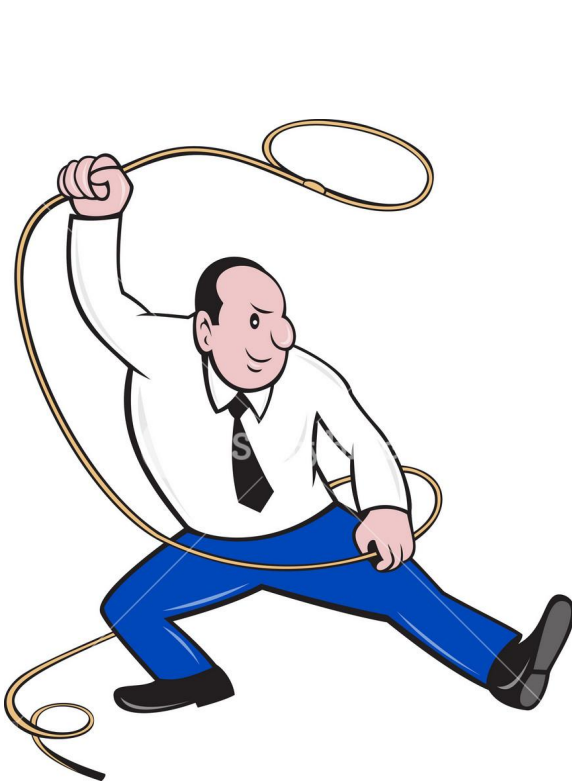


Prediction Models

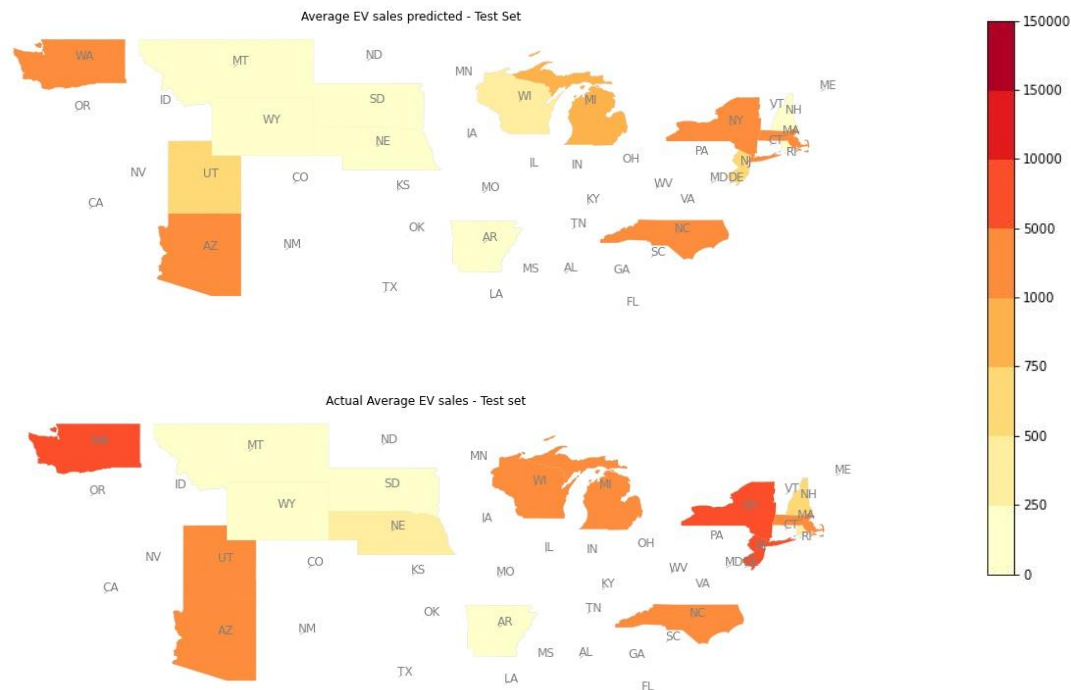
Test performance



Prediction Models - Lasso Regression

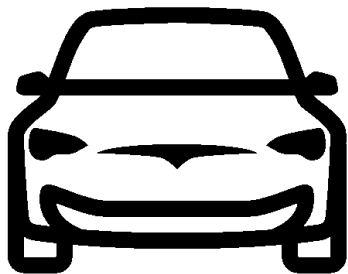


Lasso Regression - Actual v. Prediction



R^2 score = 0.88

Thank You!!



TESLA