

Retail Gasoline Price Analysis

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Motivation & Objective

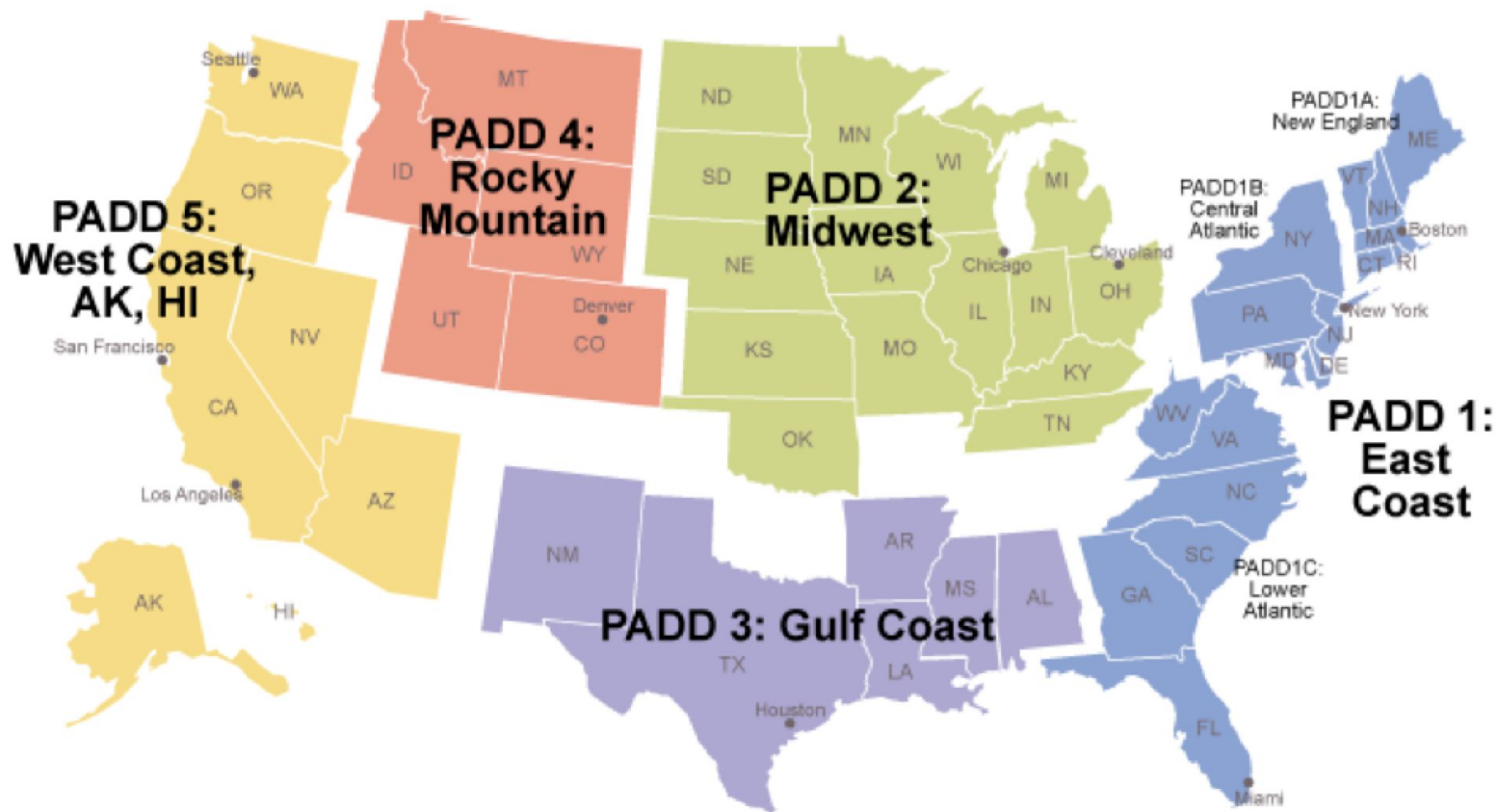


- The retail gasoline market has always been a dynamic force in the U.S. economy
- Gas price fluctuations have inconclusive behavior
- Analysis of these price trends will help draw meaning behind the variations

Methodology

- The behavior of gas prices will be measured across three criteria:
 - ▷ **Population**
 - ▷ **Vehicle registrations**
 - ▷ **Petroleum imports**
- Analysis among 5 major regions of the U.S.
- Weekly gas price data was scraped to analyze the trend in each specific region over time
- Imports, vehicle registrations, and population data were manually combined for each region, and correlated with gas price





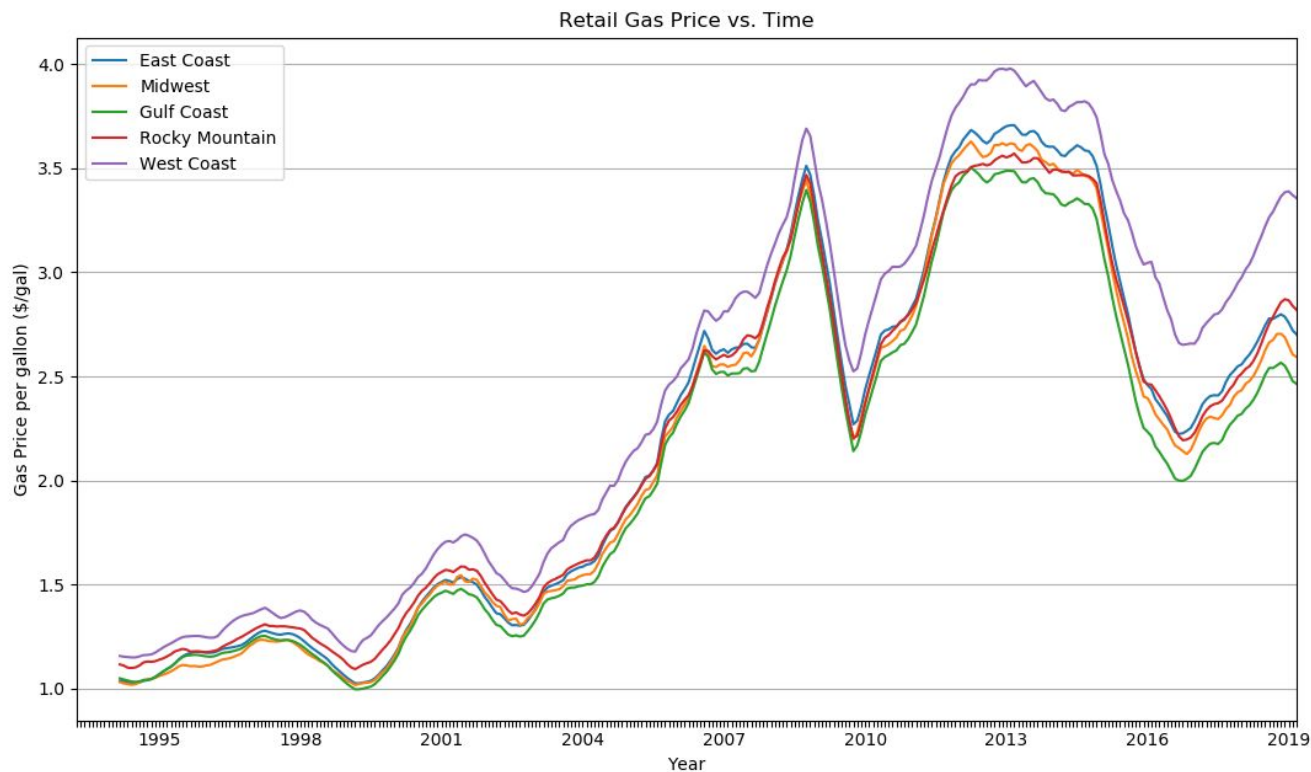
Petroleum Administration for Defense
Districts (PADD)

Datasets

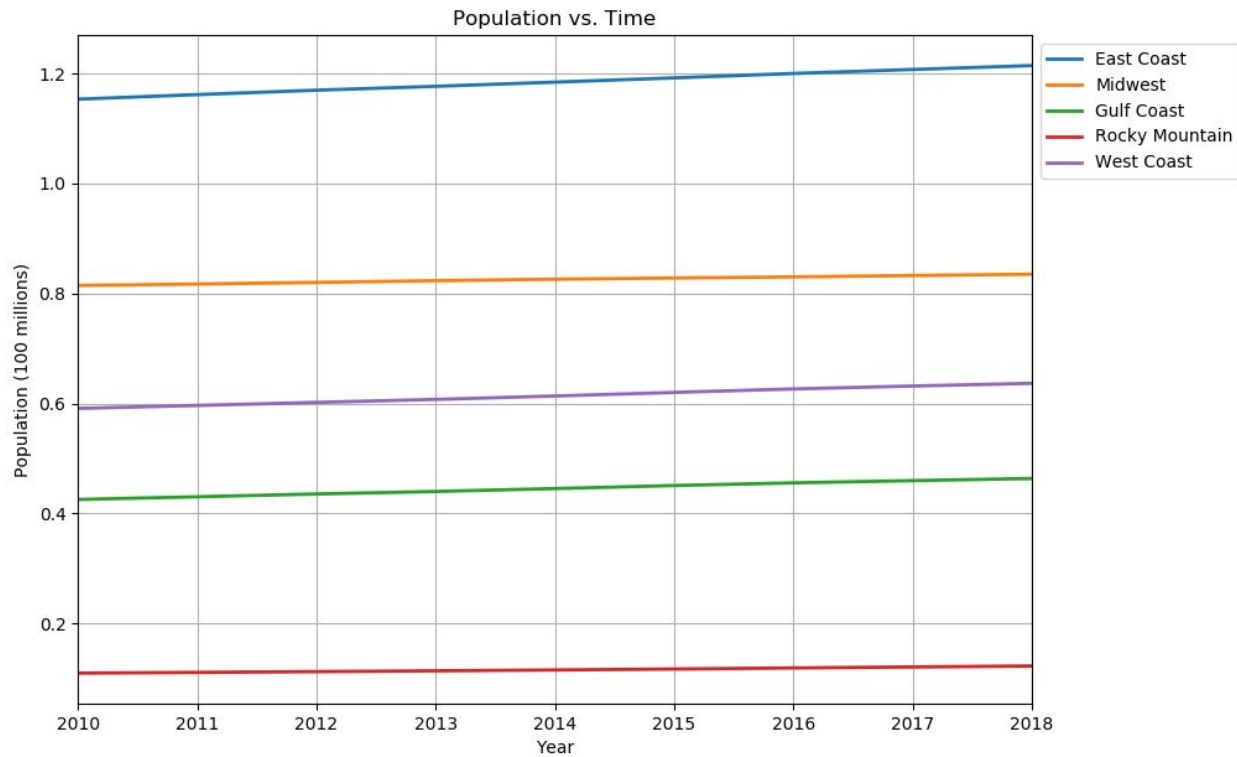


- U.S. Energy Information Administration
 - Weekly gas prices (1993–2019)
 - Imports of crude oil barrels (2005–2019)
- U.S. Census
 - Population per state (2010–2018)
- U.S. Department of Transportation
 - Vehicle registrations per state (1997–2014)

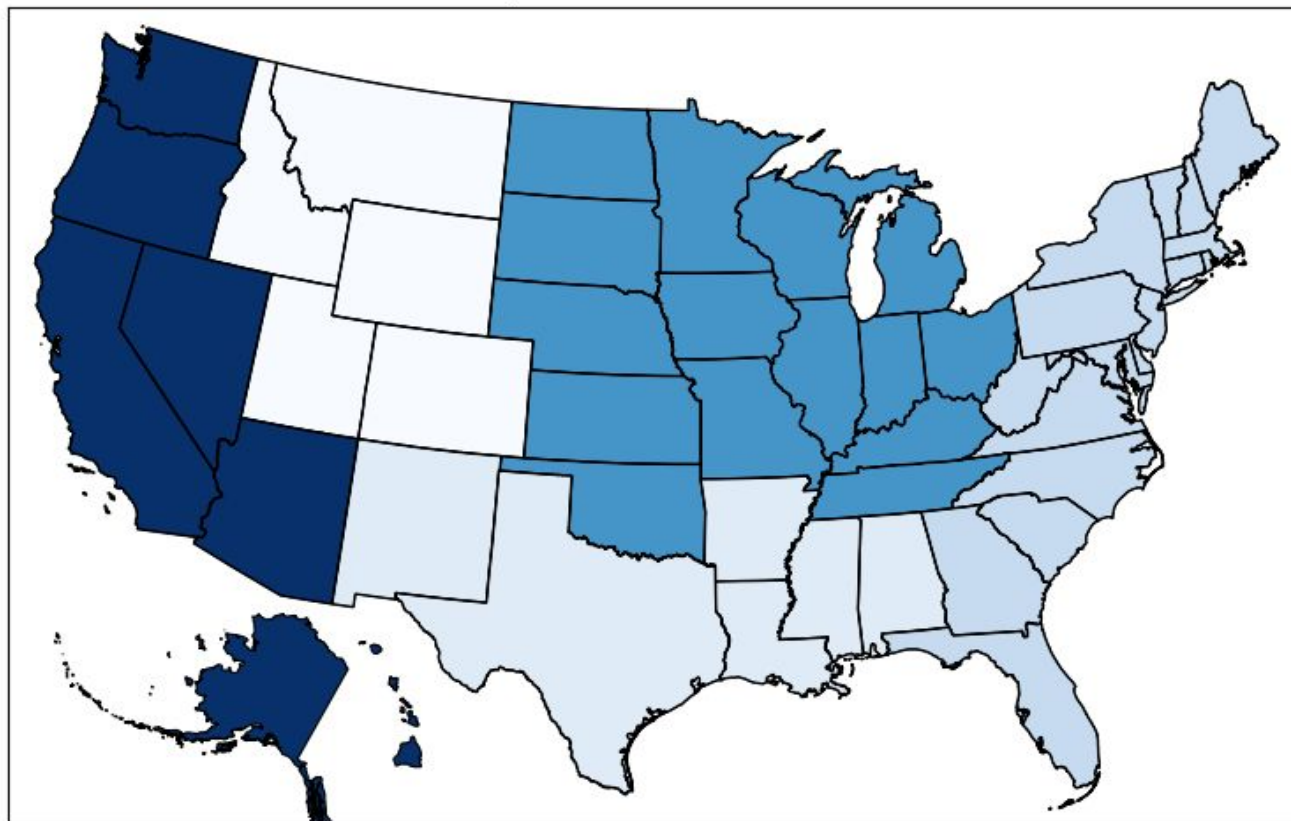
Gas Price



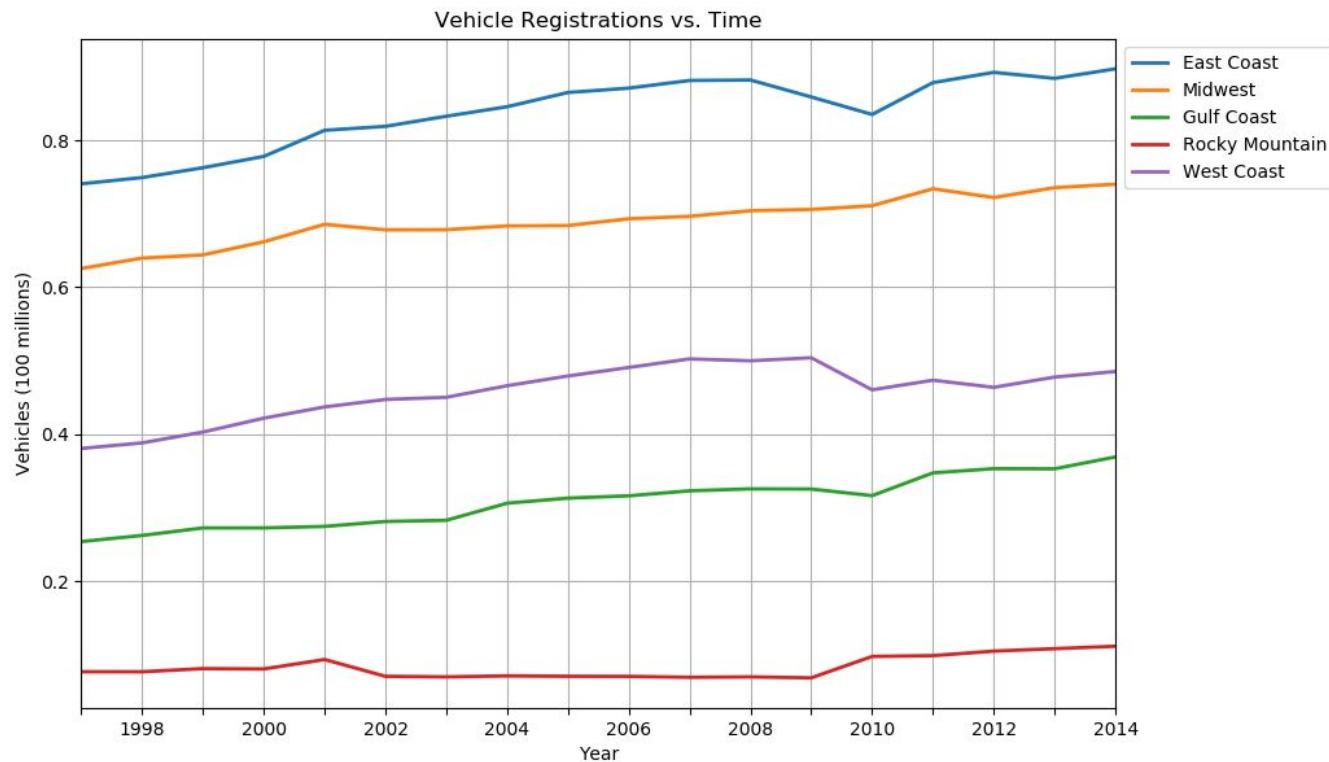
Population



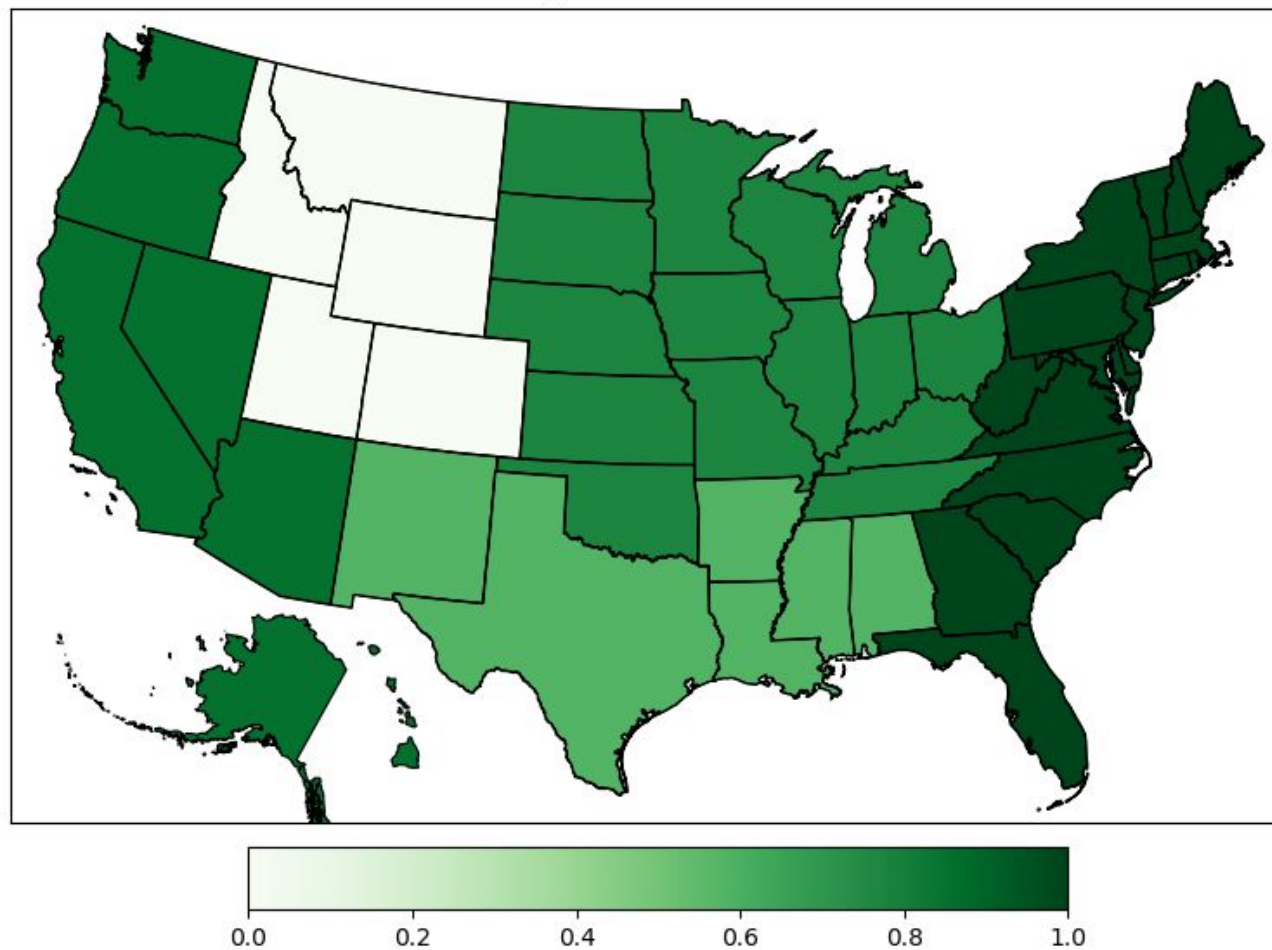
Correlation of
Population vs. Gas Price



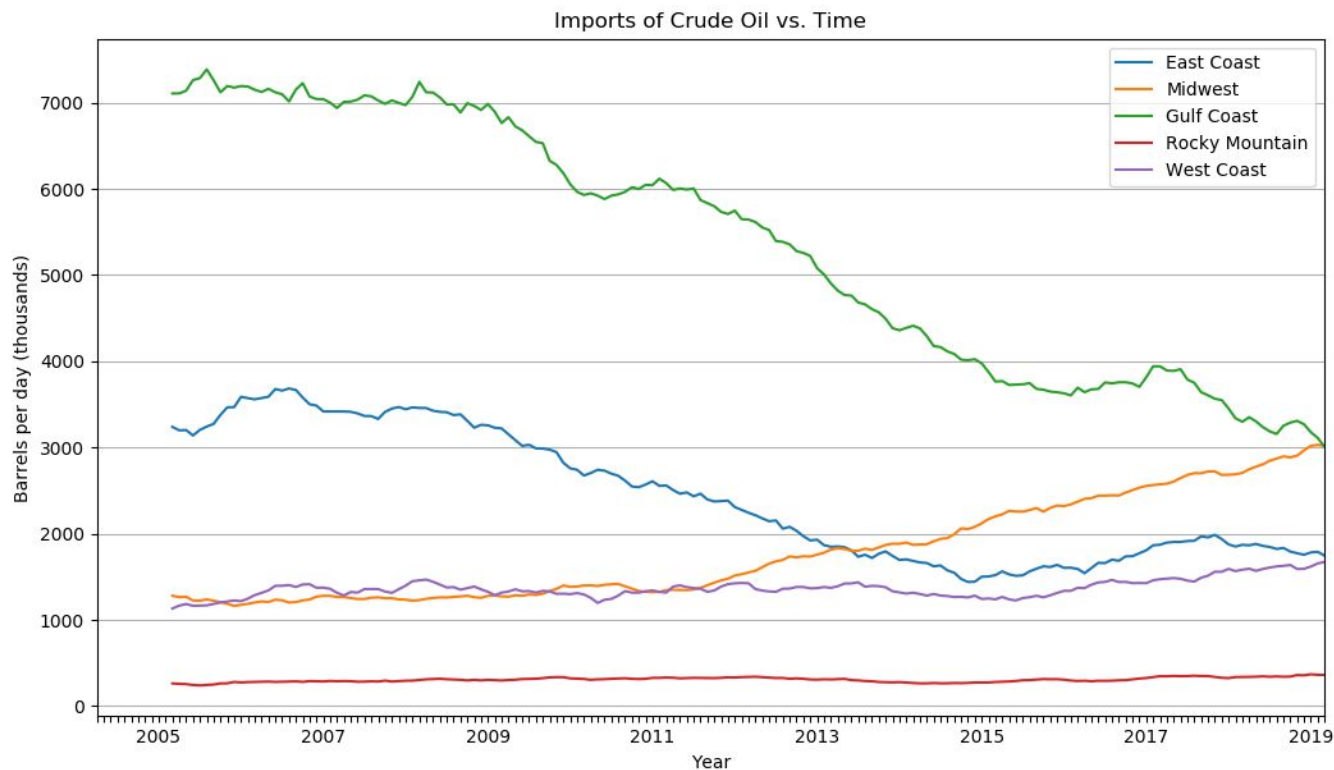
Vehicle Registration



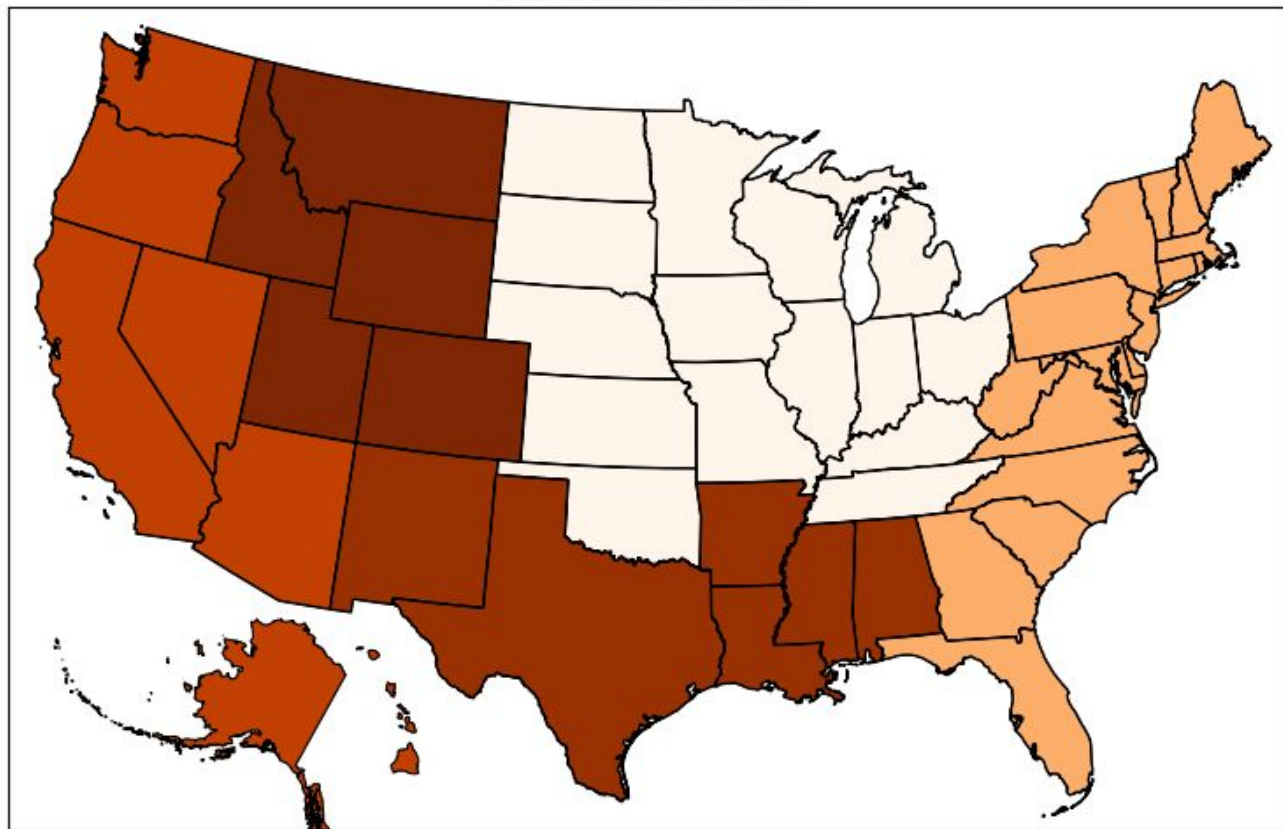
Correlation of
Vehicle Registrations vs. Gas Price



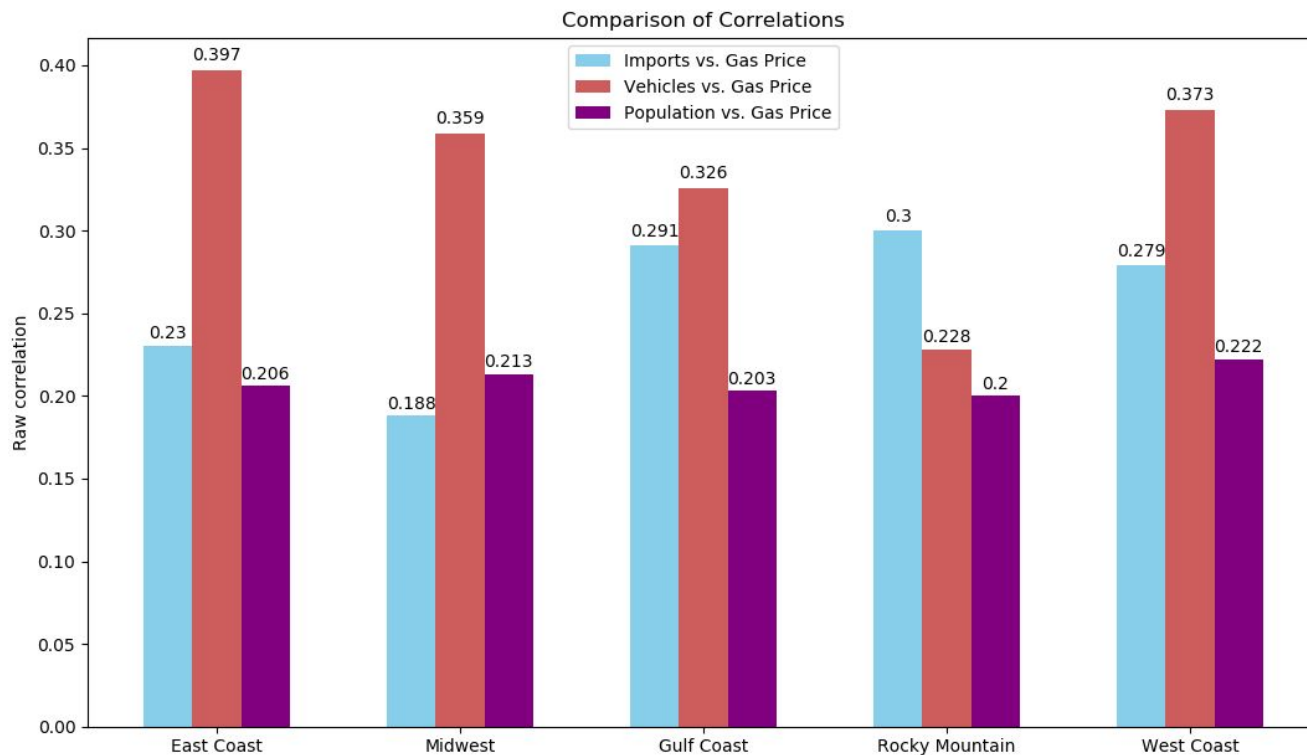
Petroleum Imports



Correlation of
Imports vs. Gas Price



Comparison



Discussion



- Vehicle registrations are most correlated with gas prices
 - ▷ Demand
 - ▷ Metropolitan areas
 - ▷ Geography
- Increasing trends
 - ▷ More vehicle registrations
 - ▷ Low quality domestic oil

Summary

- Gas prices are always changing
- The more vehicles on the road, the higher the demand for gas!
- Prices may steadily increase in the coming years



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