

Forecasting Brazilian Gas Prices

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Introduction

The Brazilian National Agency of Petroleum, Natural Gas and Biofuels releases weekly reports of gas, diesel and other fuels prices used in transportation across the country. These datasets provide the mean value per liter, number of gas stations analyzed, and other information grouped by regions and states across the country.

These gas prices can be very unpredictable and experience significant change frequently. Understanding the variables that affect these prices and the autocorrelation in the data can improve understanding of future prices in the market and enable forecasting of gasoline prices.

Problem Statement

Energy prices, including gasoline, can be difficult to understand and predict. This project aims to use historical data containing a variety of metrics to develop models and conclusions from the data to accomplish the objective of understanding the factors that affect these prices and forecasting future prices.

Project Summary

The project group's primary task will be developing a forecasting model for future Brazilian gas prices. We will complete cross-validation for the variables and parameters included in the model to develop a well-fitted model with all relevant variables that are available. We will then evaluate the model produced. Secondary tasks could include analyzing variability of prices within regions and producing a report of the cheapest states on average.

Dataset

<https://www.kaggle.com/matheusfreitag/gas-prices-in-brazil>