Time-Series Analysis of Fuel Price Dynamics: Unravelling Patterns, Assessing Influential Factors, and Predicting Trends.

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Our project is based on a weekly data set comprising fuel prices in Italy over 18 years taken from the government site. With the time series analysis techniques, we will explore the patterns and factors affecting fuel prices and try to build a model for predicting future prices. The data set consists of fuel prices, taxes and fuel price dynamics. We will build a model for forecasting future prices and understand different kinds of trends and relationships involved in the data set using methods of time series analysis. We would investigate which time domain models, i.e. AR, MA or ARMA fits well to our data. We also aim to identify periods of heightened or diminished price fluctuations, providing insights into the stability of fuel markets. Ultimately, this comprehensive time-series analysis project will contribute to a deeper understanding of fuel price dynamics.

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