

Petrol Price Forecasting Project

Objective:

The objective of this project is to forecast petrol prices using time series analysis, with a focus on understanding and predicting the fluctuations in petrol prices in Pakistan during the ongoing economic crisis.

Introduction and Background:

Introduction:

In recent times, Pakistan has been facing a severe economic crisis, characterized by inflationary pressures and financial challenges. A critical aspect affected by this crisis is the volatile nature of petrol prices. As a computer science student and a software developer, employing time series analysis to forecast petrol prices becomes a valuable tool to gain insights and make informed decisions.

Background of the Problem:

The economic crisis in Pakistan has led to fluctuations in petrol prices, impacting various sectors of the economy. The unpredictability of these price changes poses challenges for consumers, businesses, and policymakers. Understanding and forecasting these fluctuations are essential for effective planning, budgeting, and mitigating the adverse effects on the economy.

Data Preprocessing:

The dataset used for this project undergoes thorough preprocessing to ensure its quality and relevance for time series analysis. This includes handling missing values, normalizing data, and transforming features as needed.

Modelling and Evaluation:

This section outlines the specific time series model chosen for forecasting petrol prices. It discusses the parameters, training, and validation procedures. Evaluation metrics, such as Mean Absolute Error (MAE) or Root Mean Squared Error (RMSE), are employed to assess the model's performance.

Results:

The results section presents the key findings of the time series analysis. Visualizations, graphs, or tables may be included to illustrate the accuracy and effectiveness of the forecasting model.

Conclusions:

The conclusions draw insights from the results, highlighting the significance of the model in predicting petrol prices during an economic crisis. Potential applications, limitations, and suggestions for future improvements are discussed.