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FEASIBILITY REPORT OF PETROL STATION PRICE SYSTEM

By Joey Keputa

# Introduction

In an era where inflation has led to escalating prices across various sectors, the financial implications of everyday choices are more pronounced than ever before. Among these choices, the cost of fuel stands out as a significant contributor to household expenditures. The emergence of innovative technologies has revolutionized our ability to access real-time information, empowering us to make informed decisions that can help mitigate the impact of rising prices. In response to this evolving landscape, I present the Petrol Station Pricing System, aimed at enhancing affordability for consumers by showing the live prices of fuel stations nearby. By harnessing the power of location-based services and APIs, the Petrol Station Pricing System seeks to simplify the process of identifying the nearest economical fuel source, offering a practical solution to the challenges posed by inflationary pressures on fuel prices.

# Background

In September 2021, the United Kingdom experienced a petrol crisis characterized by fuel shortages and long queues at petrol stations. The crisis was triggered by a combination of factors, including a shortage of truck drivers needed to transport fuel, a surge in demand for fuel due to panic-buying, and a lack of available fuel due to supply chain disruptions related to the COVID-19 pandemic and Brexit.

The situation led to concerns about the availability of essential goods and services, as fuel shortages could impact transportation and logistics. The UK government took steps to address the crisis by offering temporary visas to foreign truck drivers, relaxing driver working hours, and urging the public to avoid panic-buying. The crisis highlighted vulnerabilities in supply chains and the importance of addressing labour shortages and transportation issues.

We are again seeing the prices increase therefore, having a system that displays up-to-date price information from your device could be crucial for making informed decisions and saving money. This would enable you to track price trends and choose optimal times to refuel, potentially avoiding higher-cost periods and ensuring more cost-effective fuel purchases.

There are two APIs we could use for the prices of petrol stations which are PetrolPrices.com API and Fuel Prices API by Barchart OnDemand. For the map API we can use Bing maps or Google maps. - PetrolPrices.com API offer a free trial account which I can use to get petrol prices by location. They offer complete UK coverage of fuel price data updated daily for the vast majority of UK fuel stations. They are able to offer Petrol and Diesel prices per area including premium grades such as Super unleaded and high cetane content diesel. I can deliver fuel price data in various ways using their petrol and diesel database. Consumers can search by postcode or geolocation; enquire by radius point or town; static list of selected stations; specific brands such as Tesco and Esso; specific verticals like Supermarkets or motorways; various charging models to suit your requirements.

Fuel Prices API by Barchart OnDemand provide refined fuel price data and reference data. Refined fuel data can be requested for fuel selling locations, for geographic coordinates and radius, for zip code and radius, and for a specified county. Refined fuel data can be filtered by product name(s), and by number of locations will be returned .

# Outline of project

The Petrol Station Pricing System is designed to counter the impact of rising fuel costs due to inflation by offering real-time pricing information to consumers. This initiative employs location-based services and APIs to deliver live fuel price data, empowering users to make economically sound refueling decisions. By integrating PetrolPrices.com API or Fuel Prices API by Barchart OnDemand, users can access fuel price details through various search criteria such as geolocation, brand, and radius. The system not only informs users of current prices but also is fostering informed choices and potentially influencing market competition.

# Conclusion

The Petrol Station Pricing System stands as a beacon of innovation and practicality in the face of mounting fuel costs driven by inflation. With the ability to provide real-time fuel price information through cutting-edge technologies, this project offers a vital tool for consumers seeking to optimize their expenditures in an increasingly price-sensitive landscape. By leveraging the power of location-based services and APIs, the system ensures that users have access to up-to-date data right at their fingertips, empowering them to make informed decisions about fuel.

As the project integrates the PetrolPrices.com API or the Fuel Prices API by Barchart OnDemand, it delivers a comprehensive solution that caters to diverse user preferences and requirements. The capacity to search by location, brand, and radius, combined with historical and predictive pricing insights, not only enables cost-effective fuel purchases but also promotes more strategic consumption habits. By encouraging informed choices, the Petrol Station Pricing System has the potential to influence the broader market, fostering competition and reshaping how consumers and fuel stations interact.