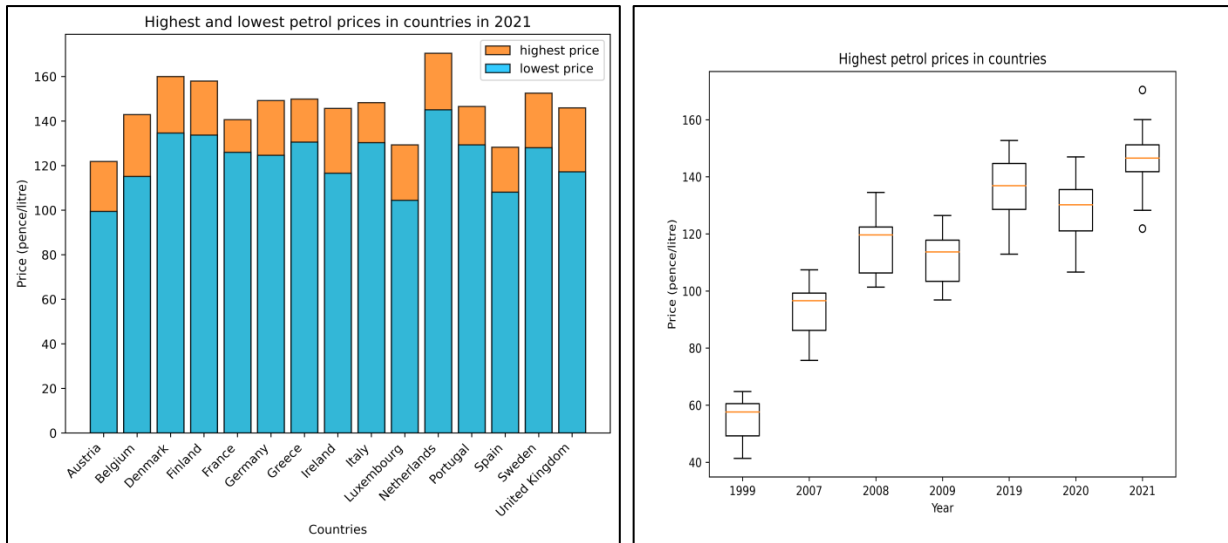


Analysis of Petrol prices (pence per litre) in the UK and 14 other European countries between 1999 and 2022

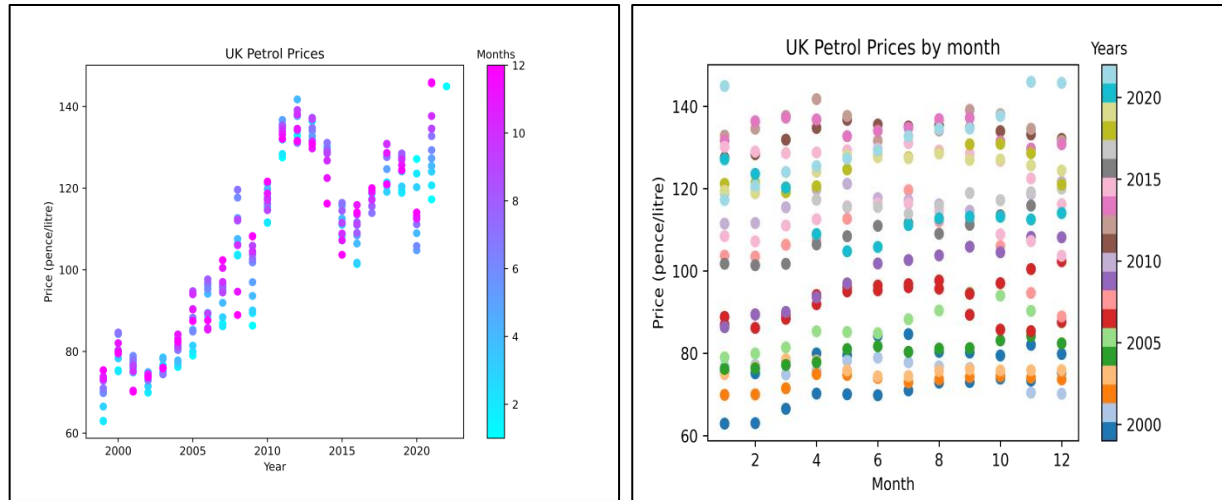
For each year the data includes: Month and price listed under the respective country names: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

The analysis showed that the petrol prices throughout the countries are increasing each year.



The most recent year with the full year data is 2021 and is selected for the bar graph above which shows the highest and lowest petrol prices in the countries. The price rose to 170.47 pence/litre in the Netherlands, which is the highest among the 15 European countries from our dataset. The price ranged between 145.95 and 117.25 pence/litre in the UK in this year.

The box plot shows the distribution of prices across the countries in the start and end year of the dataset containing some years of interest in between. 2007-2009 was the global economic recession and 2019-2021 shows the effect covid-19 had on the prices. The distributions are asymmetric and most show negative skews which means the median values are close to the highest prices. In other words, most countries had their maximum prices within a close range of the highest price in this region. The trend of prices is upward clearly indicating the increase in overall prices.



The scatter plot of the UK prices type was chosen to investigate the presence of any yearly trend in the price data and the fluctuations within each year. Significant fluctuations in prices happened in the years 2007, 2008 (global financial crisis), 2009 and 2020, 2021(aftermath of covid-19). 2002, 2003 had the steadiest petrol prices.

2007 saw a gradual increase in prices as the year progressed with 17.8% increase in December compared to January 2007 prices. January 2008 petrol price in the UK was 103.71 (p/l) increased to 119.62 (p/l) in July then decreased rapidly towards the year end.

2020 started with a high price from December 19 and continued to stay steady until a sudden drop in April 2020 when covid lockdown started afterwards the price increased slightly from July and remained steady for the remainder of the year ending at 114 in December. 2021 had a linear increase in prices.

In most cases, the price from the last month of a year continued in the beginning of the following year.

The Price vs Month scatter plot is constructed to identify any monthly pattern in the price hike. There's no mentionable pattern in the monthly data. Based on the previous year's trend it is likely that that price will be between 145 ~ 155 (p/litre) in the first few months of 2022.