

Oil Price & US Inflation

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Intro

- ❖ For this research we were interested in how oil prices affect United States inflation, especially the impact of household spending.
 - From doing in depth research through collecting data, merging, and formatting data, we are able to analyze trends and predict future correlations between the many variables that are affected by crude oil prices.
- ❖ Definitions of data we will be referencing:
 - **Brent Crude Oil Price**
 - **CPI**
 - **PPI**
 - **GDP**



Gathering & Cleaning Data



Gather Data

Gathered data from websites:

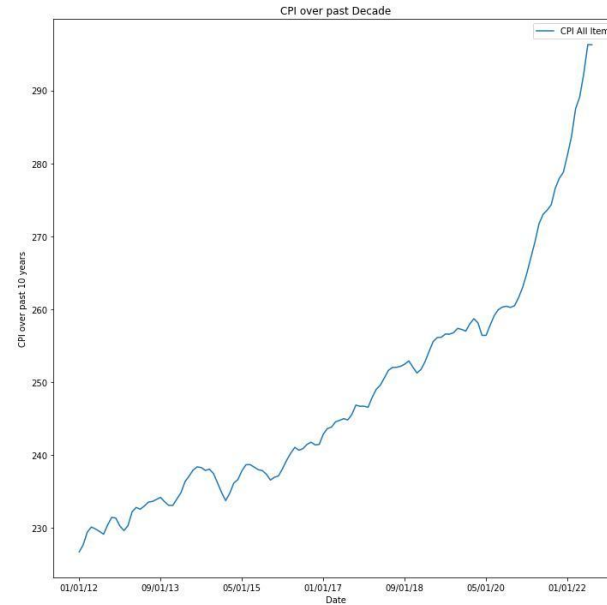
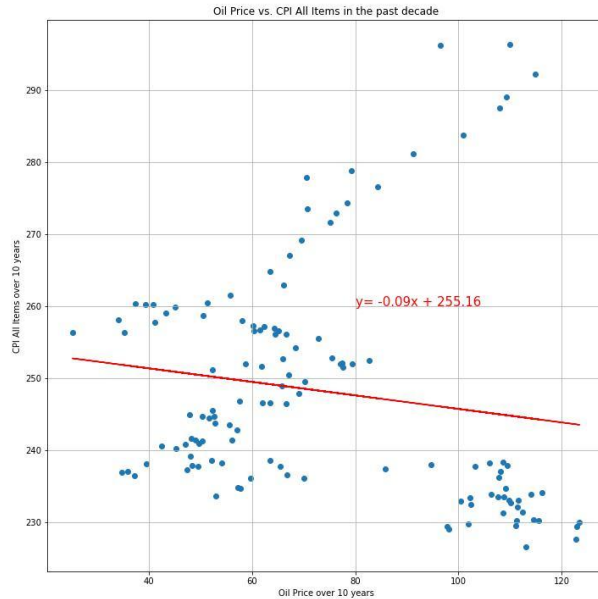
- ❖ <https://www.bls.gov/data/>
- ❖ <https://finance.yahoo.com/>
- ❖ <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>

Cleaning Data

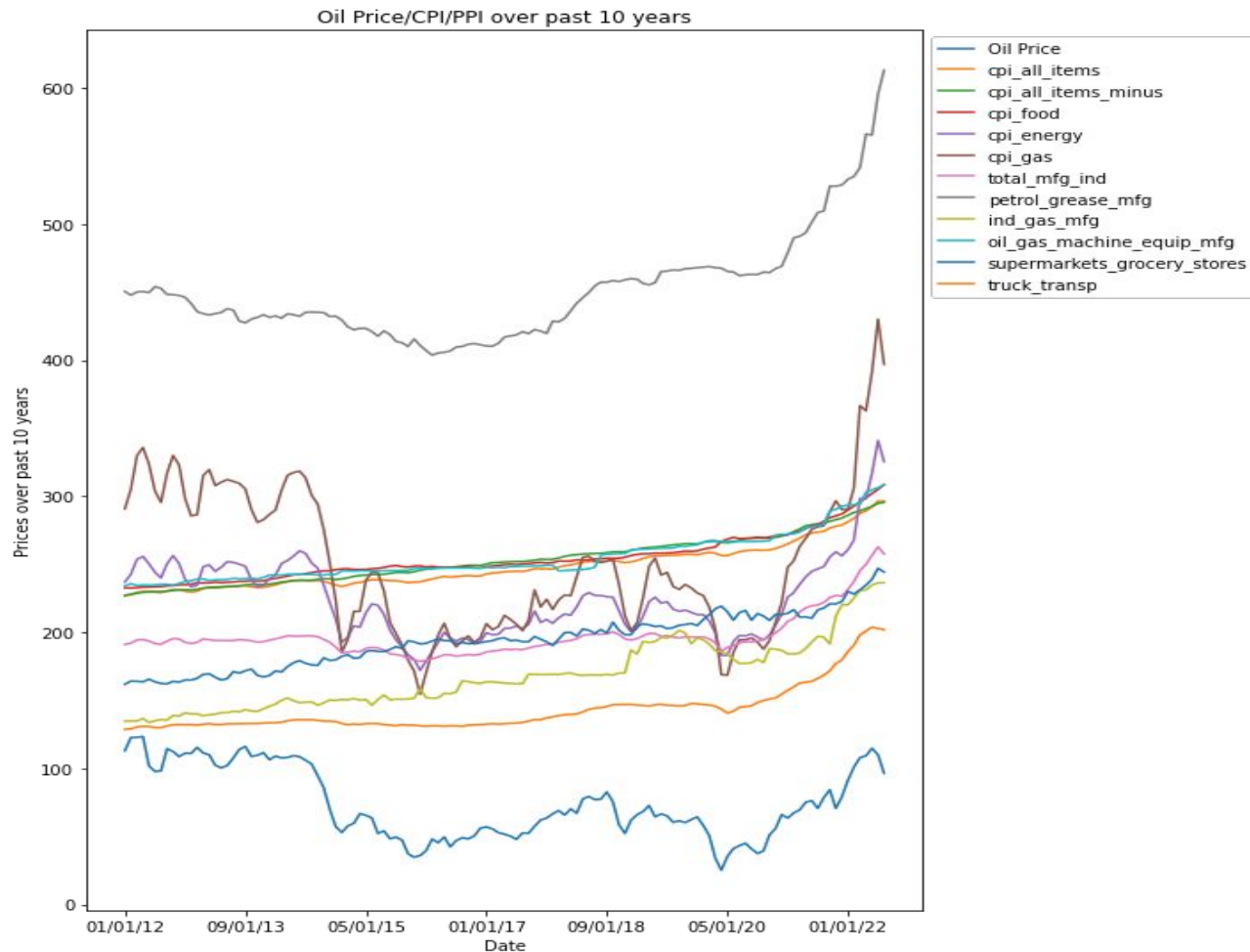
- ❖ Gathered raw CSV data and converted to Excel file
- ❖ Cleaned data in Excel and converted to final CSV file
- ❖ Changed date to index
- ❖ Created a new data frame



Does oil price affect overall inflation?



Different Sectors

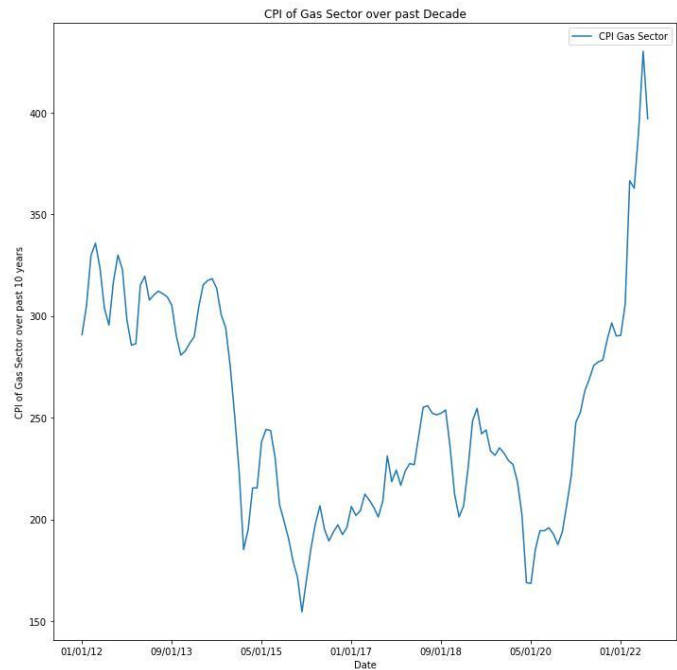
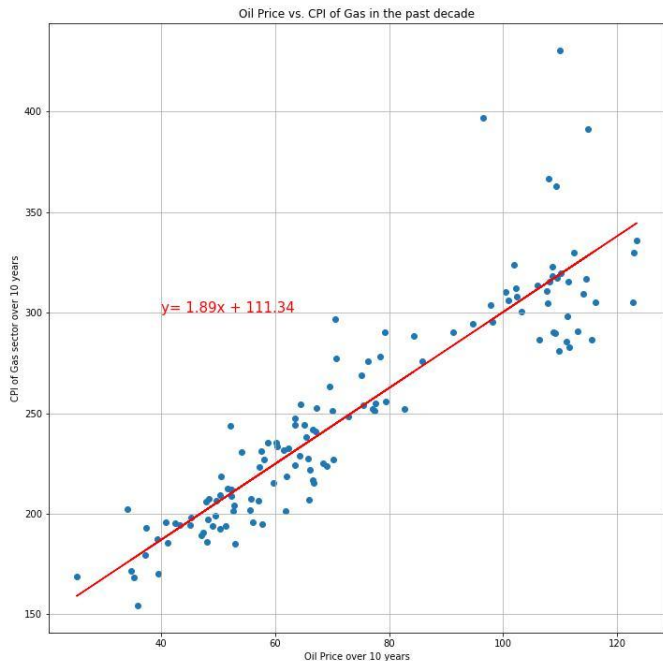


Findings

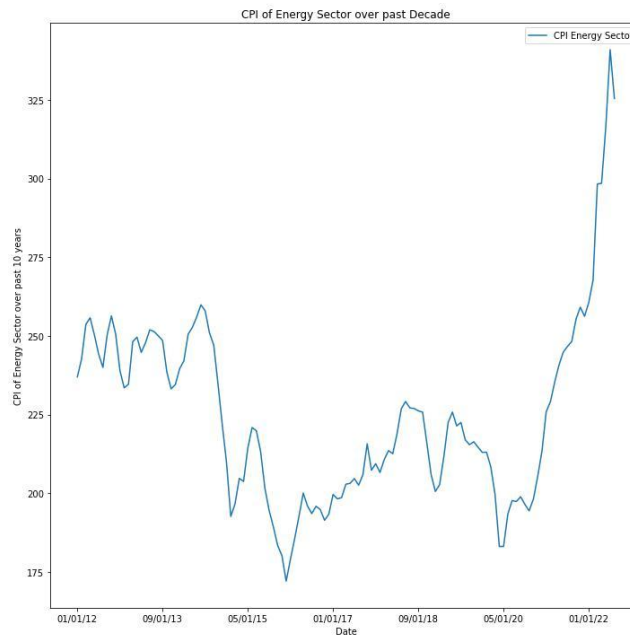
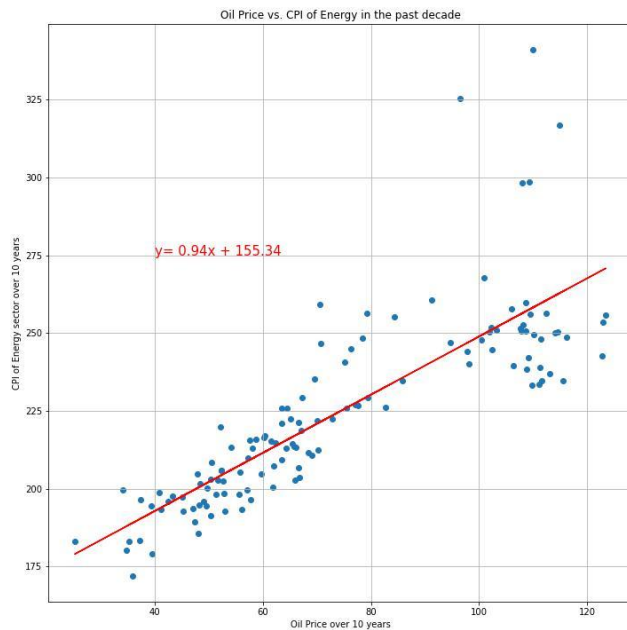
- ❖ Looking at the regression model, we cannot state that CPI and oil prices correlate.
 - Downward sloping regression line.
 - Negative relationship
 - R-Squared = 0.0236
 - Correlation = -0.15
- ❖ Affected sectors
 - CPI (Energy)
 - CPI (Gas)
 - Petroleum manufacturing



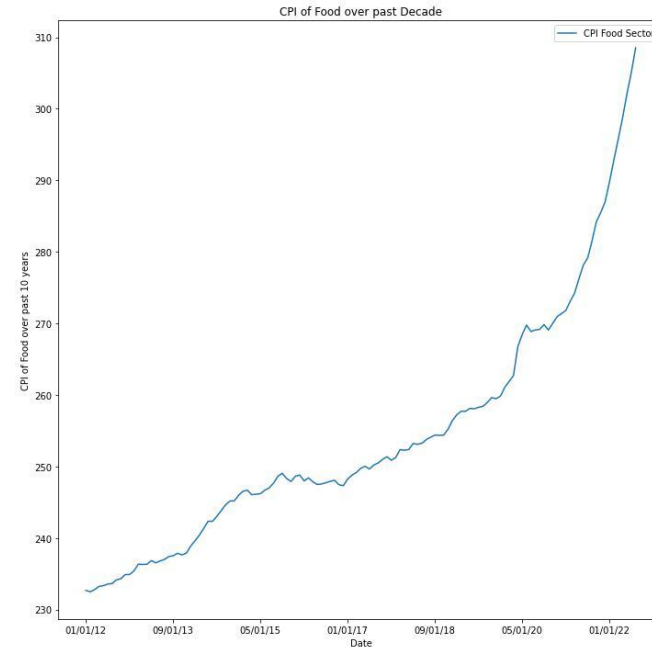
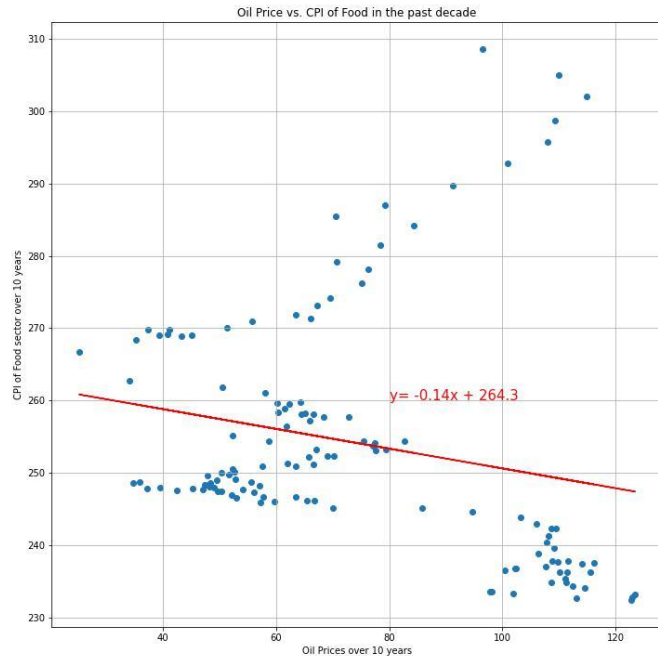
Does oil price affect gas price?



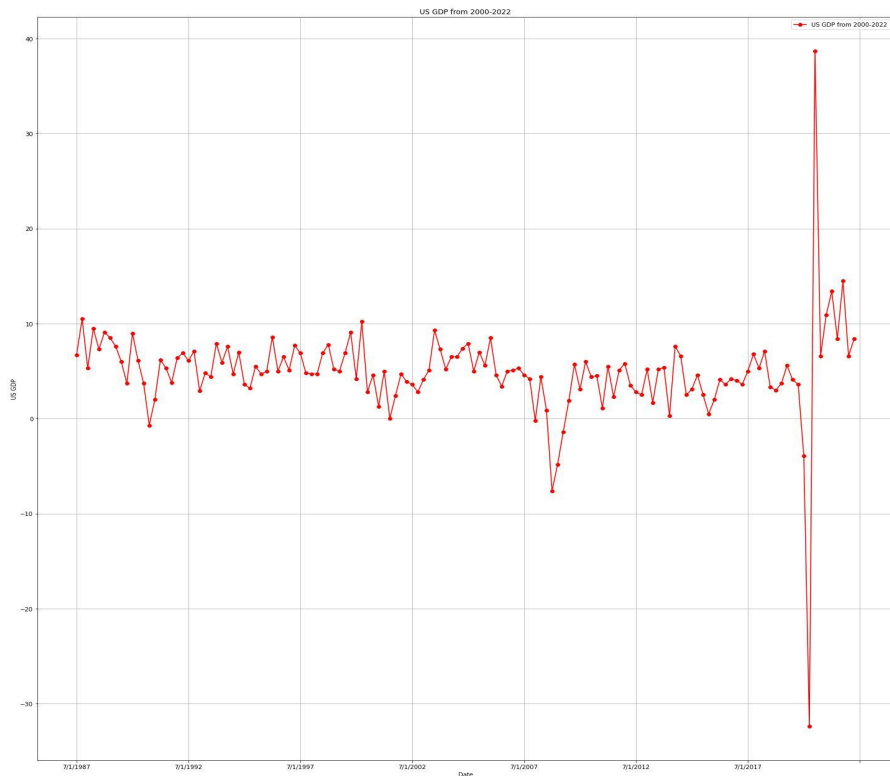
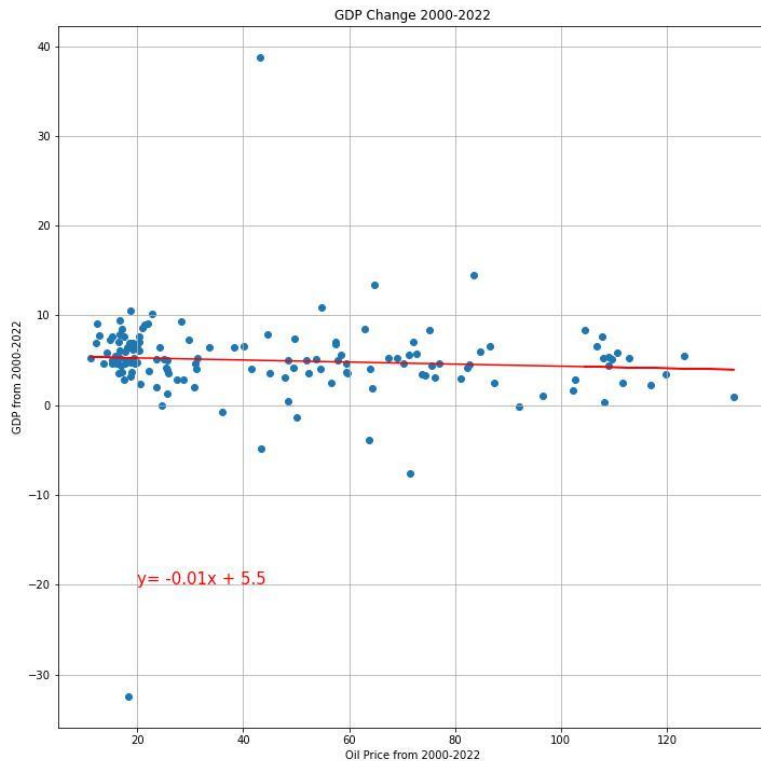
Does oil price affect energy price?



Does oil price affect food price?



GDP Change 2000-2022



Findings

- ❖ High oil prices affect the economy on a “micro” level
 - When gasoline prices increase, households may have spent more on gasoline, which reduces the budget spending on other goods and services
- ❖ On the “macro” level, the correlation between oil price increases and economic downturns in the U.S. is not perfect
- ❖ Increased oil price doesn't have a huge affect on the economic growth

Conclusion

- ❖ Oil price definitely has great impact on energy and gasoline prices.
- ❖ The impact of the oil price on the overall inflation is not as big as what we thought.
- ❖ Oil price does not have a great impact on the economic growth.



Questions

