Case Study - Global Commodity Prices

Problem Statement -

The problem is to analyze commodity prices for various commodities using the commodity prices dataset. The goal is to leverage Python, data science techniques, statistical analysis and data modeling. Perform all necessary steps to get the key insights from the data.

Dataset Description -

This dataset contains monthly commodity prices from 1960 to 2022. The commodity prices dataset includes the following attributes:

Attributes	Description
date	The date of the recorded commodity price
oil_brent	The price of Brent oil ($/bbl)
Oil_Dubai	The price of Dubai oil ($/bbl)
Coffee_Arabica	The price of Arabica coffee ($/kg)
Coffee_Robustas	The price of Robusta coffee ($/kg)
Tea_Columbo	The price of Columbo tea ($/kg)
Tea_Kolkata	The price of Kolkata tea ($/kg)
Tea_Mombasa	The price of Mombasa tea ($/kg)
Sugar_EU	The price of EU sugar ($/kg)
Sugar_US	The price of US sugar ($/kg)
Sugar_World	The price of global sugar ($/kg)

1. What is the maximum price of Robusta coffee ?
2. What is the 75th percentile of sugar prices in the European Union (EU)?
3. What is the skewness of the price distribution for Arabica coffee?
4. Is the distribution of sugar prices in the US significantly different from a normal distribution?
5. How many times does the price of Dubai oil exceed the price of Brent oil by a certain threshold $10 ?
6. What is the overall price trend for each commodity ?
7. Which commodity experienced the highest price fluctuations during the observed period?
8. How has brent oil prices vary on a quarterly basis since the last five years?
9. Is there a correlation between global sugar prices and the prices of EU sugar and US sugar?
10. Is there a significant difference in the distribution of sugar prices between Europe (EU) and the United States (US)?