

Yousif Alkharraz

Instructor: Dr. Lingfei Wu

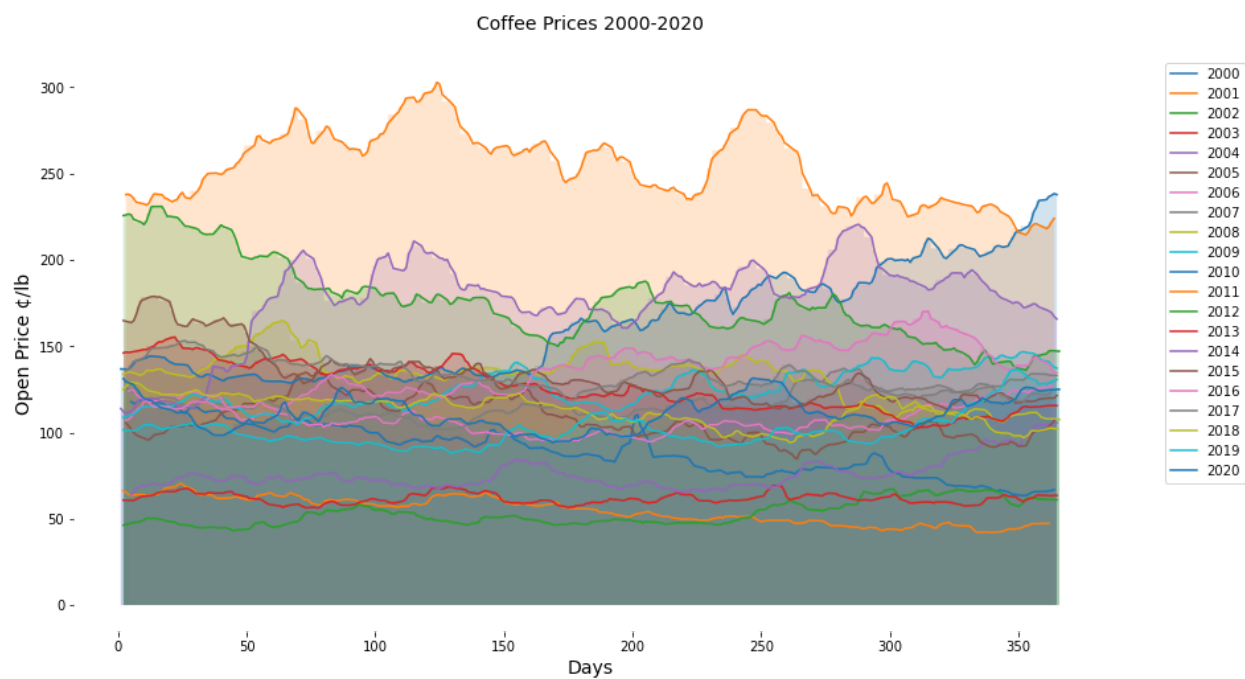
INFSCI15210-SEC1000

12-April-2023

Final Report

Coffee Daily Prices Trends Over Two Decades

Figure1



Legend:

- Each line represents a year of the 20 years in the data set and has a unique color.

X-ticks

- Days of the Year

Y-ticks

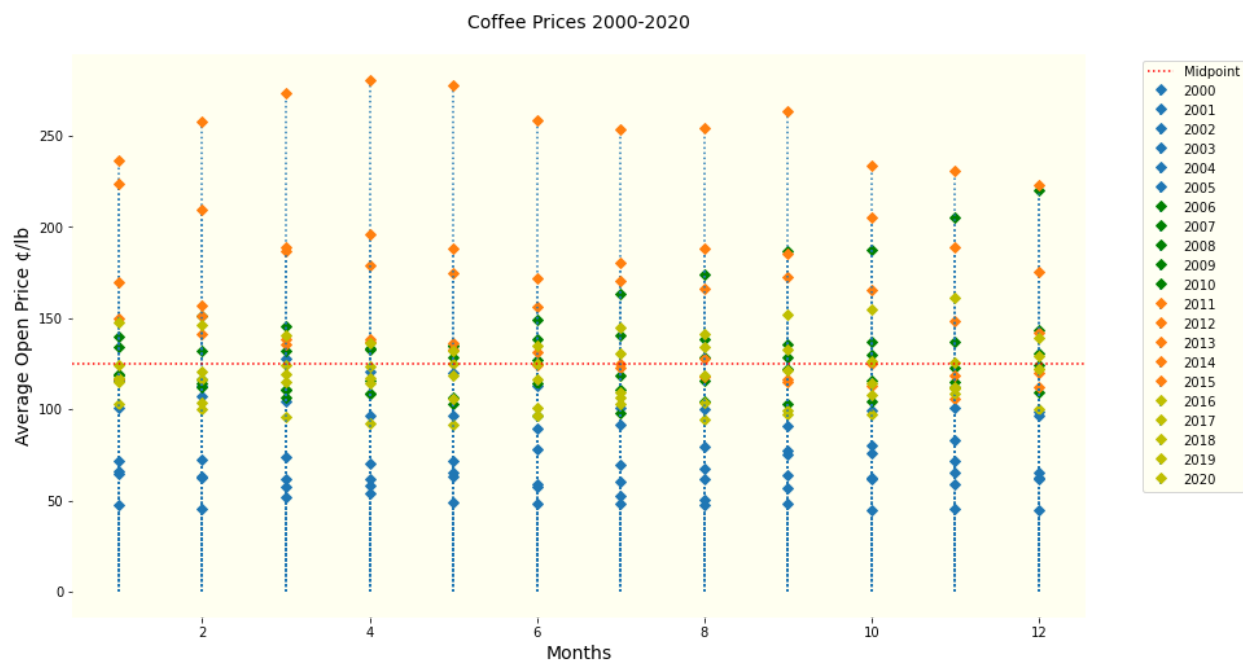
- Daily Opening Price cent/lb

Findings:

- It shows how coffee prices spiked in 2011 to historical levels due to harsh weather in major producing countries such as Brazil and Colombia (Kollewe).
- It shows that coffee prices are not increasing linearly and vary over time.

- The shaded area between the lines helps highlight the trends in the data.

Figure 2



Legend:

- Each diamond represents a year
- Colors are grouped based on every five years of the two decades
- Midpoint is the red-dotted line; it helps the viewer easily differentiate between high and low coffee prices.

X-ticks

- Months of each year

Y-ticks

- Avg daily prices of each month cent/lb

Findings:

- The stem plot reduces the noise and only brings to life the trends of the coffee prices over the data set.
- It solidifies the findings in Figure 1 one as to the years that recorded high, and looking closer; it shows that the 2011 trend trickled down all the way to 2015.
- It shows that coffee prices are not linearly increasing yearly. It follows a seasonality throughout the year.

Methodology & Data:

- The project used Python to manipulate, clean, and produce the figures above. Some technique used was ML moving average to smooth the line in Figure 1. All visualizations were produced using Matplotlib and Pandas.
- The data was obtained from Kaggle for use in this project.

Github link: <https://github.com/Y-Alkharraz/Data-Visualizations-Final-Project.git>

Significance:

- This project helps highlight a correlation between global events such as droughts and demand that can cause coffee prices to change.

References:

Kollewe, Julia. "Coffee Prices Expected to Rise as a Result of Poor Harvests and Growing Demand." *The Guardian*, Guardian News and Media, 21 Apr. 2011, <https://www.theguardian.com/business/2011/apr/21/commodities-coffee-shortage-price-rise-expected>.

Senkal, Batucan. "Daily Coffee Price." *Kaggle*, 4 Sept. 2022, <https://www.kaggle.com/datasets/psycon/daily-coffee-price>.