

Project Title: Comparing Google and Amazon Historical Data

Introduction:

In this project, we aim to analyze and compare the historical stock data of two tech giants, Google (GOOGL) and Amazon (AMZN). We will use Python with the help of the Pandas, yfinance, and Matplotlib libraries to fetch historical stock price data, calculate daily returns, and create visualizations to gain insights into the stock performance of these companies over a specified time period from January 1, 2010, to January 1, 2023.

Data Collection:

```
import pandas as pd
import yfinance as yf

# Define the time period
start_date = "2010-01-01"
end_date = "2023-01-01"

# Fetch historical data for Google and Amazon
google_data = yf.download("GOOGL", start=start_date, end=end_date)
amazon_data = yf.download("AMZN", start=start_date, end=end_date)

[*****100%*****] 1 of 1 completed
[*****100%*****] 1 of 1 completed
```

Data Analysis:

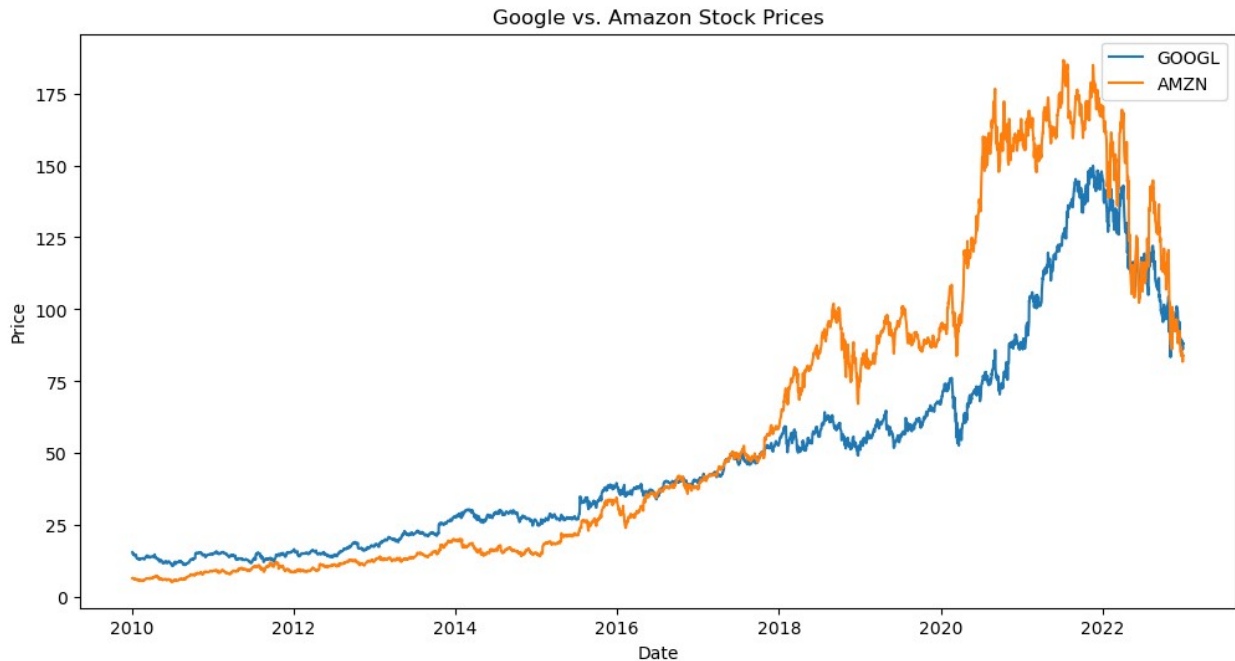
We perform two main analyses in this project:

1. Plotting Historical Stock Prices:

```
# Plot historical stock prices
import matplotlib.pyplot as plt

plt.figure(figsize=(12, 6))
plt.plot(google_data["Adj Close"], label="GOOGL")
plt.plot(amazon_data["Adj Close"], label="AMZN")
plt.title("Google vs. Amazon Stock Prices")
```

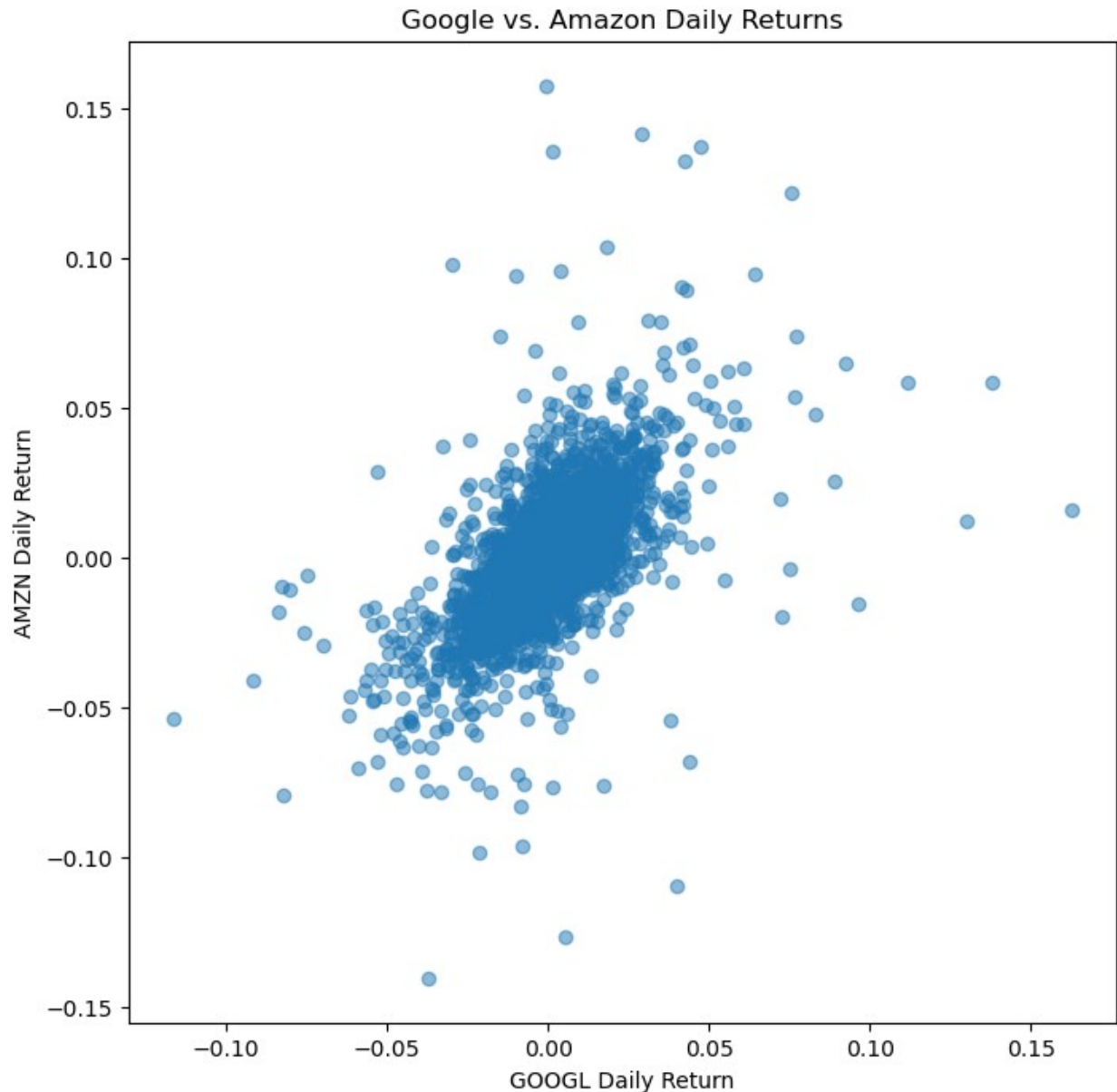
```
plt.xlabel("Date")
plt.ylabel("Price")
plt.legend()
plt.show()
```



2. Analyzing Daily Returns:

```
# Calculate daily returns
google_data["GOOGL Daily Return"] = google_data["Adj
Close"].pct_change()
amazon_data["AMZN Daily Return"] = amazon_data["Adj
Close"].pct_change()

# Plot a scatter plot of daily returns
plt.figure(figsize=(8, 8))
plt.scatter(google_data["GOOGL Daily Return"], amazon_data["AMZN Daily
Return"], alpha=0.5)
plt.title("Google vs. Amazon Daily Returns")
plt.xlabel("GOOGL Daily Return")
plt.ylabel("AMZN Daily Return")
plt.show()
```



Results and Insights:

Conclusion:

This project provided an **in**-depth analysis of the historical stock data **for** Google **and** Amazon.

By examining historical stock prices **and** daily returns, we gained valuable insights into the performance of these companies.

Such analyses are crucial **for** investors, financial analysts, **and** anyone interested **in** understanding the dynamics of the stock market.