



Extracting and Visualizing Stock Data

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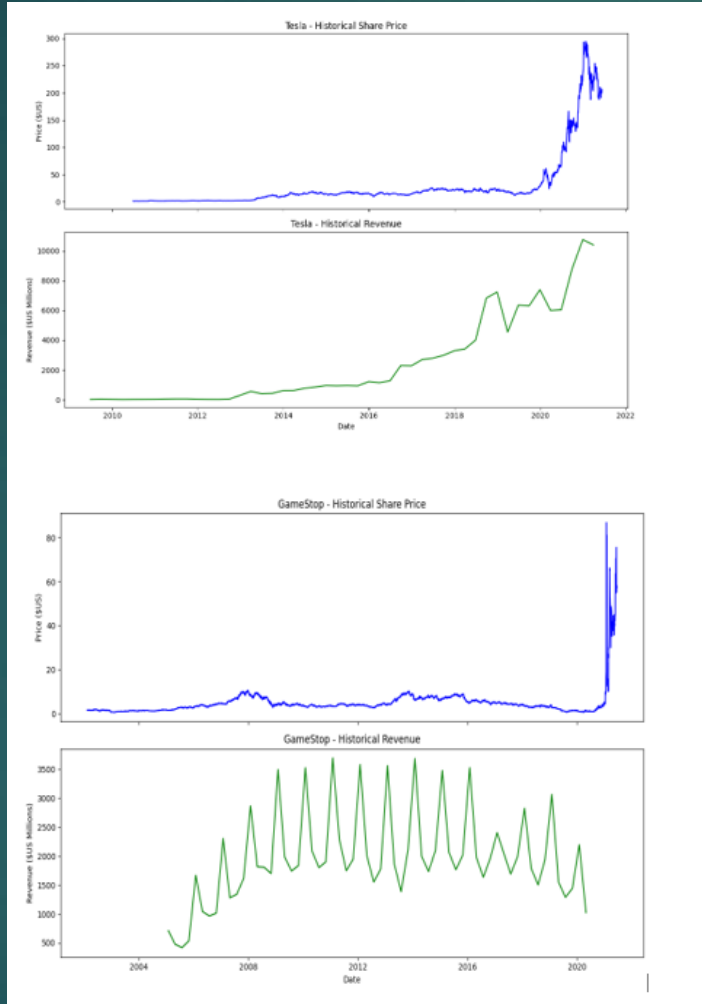
INTRODUCTION

- Extracting and visualizing stock data.
- Spotting trends and patterns of of Tesla and GME's stock data.

EXECUTIVE SUMMARY

- ▶ Overview of data analysis process and findings
 - ▶ Collected data using APIs and web scraping
 - ▶ Cleaned and wrangled data for analysis
 - ▶ Created visualizations to highlight key findings using Python.
 - ▶ Developed a comprehensive dashboard

Dashboard



Tesla's Growth Trajectory:

Share Price: Remained relatively low and stable until a dramatic surge starting around 2020, reaching unprecedented highs.

Revenue: Demonstrated consistent and accelerating revenue growth over the decade, particularly after 2018, indicating strong business expansion.

GameStop's Volatility and Cyclicality:

Share Price: Experienced a massive, short-lived price spike in early 2021, contrasting with its previously low and stable price history.

Revenue: Displayed a highly cyclical pattern, with annual peaks and troughs, suggesting strong seasonality (likely holiday-driven sales). The overall revenue trend appears more stagnant compared to Tesla's consistent growth.

Findings & Implications

► Findings

- **Tesla Performance:** Tesla demonstrated consistent and significant revenue growth from 2010 to 2022. Its share price remained relatively low and stable until around 2020, at which point it experienced an exponential increase.
- **GameStop Performance:** GameStop's revenue exhibited strong seasonality, with annual spikes, but showed a general lack of significant long-term growth. Its share price was also relatively stable at a low level until a sudden, massive, and temporary spike around 2021.
- **Market Events:** Both companies experienced sharp, dramatic increases in share price around the 2020-2021 period, which were disproportionate to the immediate changes in their respective revenues.

► Implications

- **Tesla Valuation:** The initial low share price despite growing revenue suggests that the market may have been slow to recognize Tesla's potential. The eventual price surge implies strong investor confidence in the company's future growth and profitability, aligning the share price with its sustained business performance.
- **GameStop Volatility:** The sharp, temporary spike in GameStop's share price, without a corresponding increase in long-term revenue, is characteristic of market volatility events (e.g., the "meme stock" phenomenon). This suggests that short-term market dynamics, such as social media sentiment and coordinated retail investor action, can significantly impact stock prices independently of the company's fundamental financial health.
- **Decoupling of Price and Fundamentals:** The graphs highlight instances where share prices can decouple from a company's fundamental revenue performance, especially during periods of high market speculation or unique market events.
- **Historical Revenue:** The revenue graph exhibits a distinct seasonal or cyclical pattern, with regular peaks and troughs each year, followed by a slight decline in overall magnitude towards the end of the period.

Conclusion

- ▶ In conclusion, Tesla exhibits a pattern of sustained, explosive growth in both market value and revenue, while GameStop's performance is characterized by stable, cyclical revenue and extreme, event-driven share price volatility.