

Time Series Analysis of Daily NVIDIA Closing Prices

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February 2025

The technology sector has witnessed unprecedented growth over the past two decades, with NVIDIA emerging as a key player due to its innovations in graphics processing units (GPUs), artificial intelligence, and data center solutions. In this project, we propose a time series analysis of NVIDIA's stock volatility, utilizing daily Open-High-Low-Close (OHLC) data spanning the last two decades (2005–2025). The dataset is sourced from Yahoo Finance, a publicly available financial data platform. Our objective is to investigate volatility patterns, uncover long-term trends, and evaluate the influence of technological and market developments on NVIDIA's stock price fluctuations. By employing advanced time series techniques such as ARIMA and GARCH models, we aim to forecast future volatility and provide actionable insights into the stock's behavior within the dynamic tech market. This analysis will shed light on NVIDIA's financial resilience and contribute to understanding volatility in emerging technology stocks.

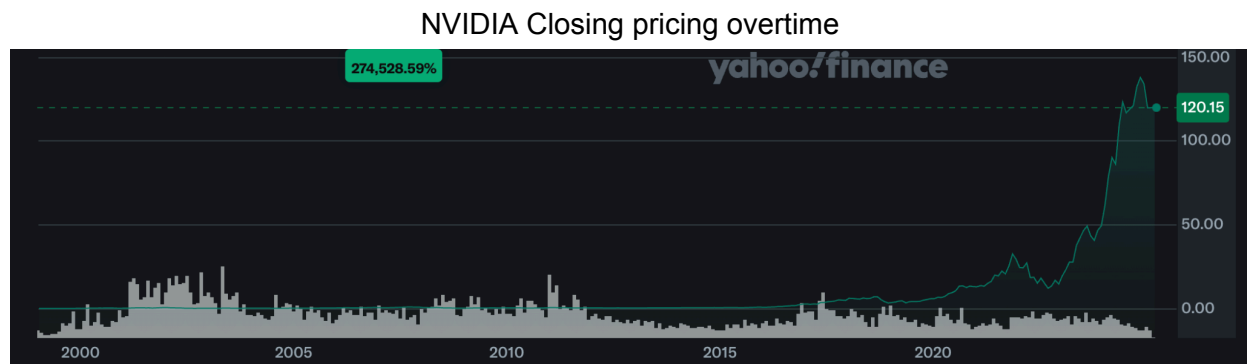


Figure 1: Nvidia Closing Price (in \$) Over Time

[Link to Dataset : Yahoo Finance](#)