

Lecture 02

Jupyter Notebook - Empty

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Market Capitalization of NVIDIA and Intel (2012 - 2024)

The Python library `yfinance` is often used to download stock market data.

```
import yfinance as yf
import matplotlib.pyplot as plt
```

Let's define the stocks that are of interest for this analysis.

```
# Define the tickers for NVIDIA and Intel
tickers = ['NVDA', 'INTC']
```

Now, downloading the data to our Colab instance or local computer.

```
# Download the historical market data since 2012
data = yf.download(tickers, start='2012-01-01', end='2024-01-01', group_by='ticker')
```

Focusing on the closing prices.

```
# Extract the adjusted closing prices
nvda_data = data['NVDA']['Adj Close']
intc_data = data['INTC']['Adj Close']
```

Drawing.

```

# Plot the stock price data
plt.figure(figsize=(12, 6))
plt.plot(nvda_data.index, nvda_data, label='NVIDIA')
plt.plot(intc_data.index, intc_data, label='Intel')
plt.title('Stock Prices of NVIDIA and Intel (2012 - 2024)')
plt.xlabel('Date')
plt.ylabel('Stock Price (USD)')
plt.legend()
plt.grid(True)
plt.show()

```

Now calculating the market capitalisation.

```

# Fetch the number of shares outstanding (this gives the most recent value)
nvda_shares = yf.Ticker('NVDA').info['sharesOutstanding']
intc_shares = yf.Ticker('INTC').info['sharesOutstanding']

# Calculate market capitalization (Adjusted Close * shares outstanding)
nvda_market_cap = data['NVDA']['Adj Close'] * nvda_shares
intc_market_cap = data['INTC']['Adj Close'] * intc_shares

```

While the share prices of NVIDIA and Intel are comparable, NVIDIA's market capitalization has experienced a significant increase since 2020, in contrast to Intel's more stable market capitalization.

```

# Plot the market capitalization data
plt.figure(figsize=(12, 6))
plt.plot(nvda_market_cap.index, nvda_market_cap, label='NVIDIA')
plt.plot(intc_market_cap.index, intc_market_cap, label='Intel')
plt.title('Market Capitalization of NVIDIA and Intel (2012 - 2024)')
plt.xlabel('Date')
plt.ylabel('Market Capitalization (USD)')
plt.legend()
plt.grid(True)
plt.show()

```