

**CASE STUDY**  
**ON**  
**‘FINANCIAL TRENDS AND VOLATILITY**  
**ANALYSIS IN MOVIE INDUSTRY’**

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**3<sup>rd</sup> Semester MCA**  
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## OBJECTIVE

The goal of this analysis is to evaluate the financial performance and volatility of key companies in the movie and entertainment industry. This includes understanding how their stock prices have evolved over time, identifying any volatility patterns, and evaluating potential correlations between these companies. The specific objectives are:

1. **Trend Analysis:** Examine historical stock price trends of major entertainment companies such as Disney (DIS), Netflix (NFLX), Comcast (CMCSA), and Sony (SONY) from 2019 to 2023.
2. **Volatility Analysis:** Analyze daily price fluctuations (returns) for the selected companies to understand market risk.
3. **Correlation Analysis:** Investigate the relationship between the stock prices of these companies to identify any potential diversification opportunities.
4. **Moving Average Analysis:** Assess short-term and long-term price movements using moving averages, focusing on Disney (DIS).

## PROBLEM STATEMENT

1. Select movie production and entertainment companies
2. Analyze their historical stock price trends over a specific time frame.
3. Identify financial volatility and calculate correlations between companies' stock performances.
4. Investigate the impact of global events (e.g., the COVID-19 pandemic) on the stock prices.
5. Evaluate moving averages to understand short-term and long-term financial trends.

## SOLUTION

- 1. Data Collection:** Use yfinance to download historical stock price data for the selected companies (DIS, NFLX, CMCSA, SONY) and the time period of interest (2019-2023). This data will include adjusted close prices.
- 2. Trend Analysis:** Plot the adjusted closing prices for each company to visualize their stock price trends over the given time frame.
- 3. Volatility Analysis:** Calculate daily returns (percentage change) for each company's stock. Visualize these fluctuations with line charts to understand the degree of daily price variation.
- 4. Correlation Analysis:** Calculate the correlation matrix of daily returns for the selected companies. Create a heatmap to visualize the strength of the relationship between the companies' stock performances.
- 5. Moving Average Analysis:** Calculate and plot the 20-day and 50-day moving averages for Disney (DIS) to highlight both short-term and long-term trends. This helps in identifying signals for buy or sell decisions based on price smoothing.

## IMPLEMENT CODE

GitHub:

[https://github.com/MalsawmtluangaBualte/CaseStudy\\_TSP4.0/blob/main/movie.py](https://github.com/MalsawmtluangaBualte/CaseStudy_TSP4.0/blob/main/movie.py)

## OUTPUT

- 1. Trend Analysis:** A line chart of the stock prices for DIS, NFLX, CMCSA, and SONY.
- 2. Volatility Analysis:** A chart showing daily return fluctuations for each company.
- 3. Correlation Heatmap:** A heatmap of correlations between the companies to analyze their relationship.
- 4. Moving Average Analysis:** A moving average chart for Disney (DIS), showing the 20-day and 50-day trends.