



MULTI-STOCK INTERACTIVE VISUALIZATION DASHBOARD

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MOTIVATION

01 ANALYSIS

Investors need to make informed decisions

02 MULTIPLE STOCKS

Current tools lack flexible multi-stock views

03 USER FRIENDLY

Supports basic analysis, gives clearer view of market



QUESTION & DATASET

How to visualize multi-stock price, volume, volatility effectively for beginner investors?

Dataset: Daily OHLC and volume for 5 major stocks

Time span: 1/4/2010 - 31/12/2024





METHODS & TOOLS

- R + Shiny for interactive visualizations
- highcharter: Candlestick charts, Volume, Price trend, Volatility
- Data prep with tidyverse, rolling stats with zoo



DASHBOARD FEATURES

- Multi-stock & date range selection
- Candlestick, Volume, Price Trend, Volatility views
- Buy/Sell signals
- Interactive zoom & sliders

DEMO

KEY INSIGHTS

- Compare trends and volume across stocks easily
- Smoothing highlights important patterns
- Indicators, signals for user
- Interactive design improves user exploration

LIMITATIONS

- Static dataset, no live updates
- Performance issues with many stocks or large data
- No predictive analytics included
- UI can be enhanced further

FUTURE WORK

- Real-time data integration
- More stocks and instruments support
- Add predictive analytics and portfolio tools
- UI customization and user settings
- Accessibility improvements