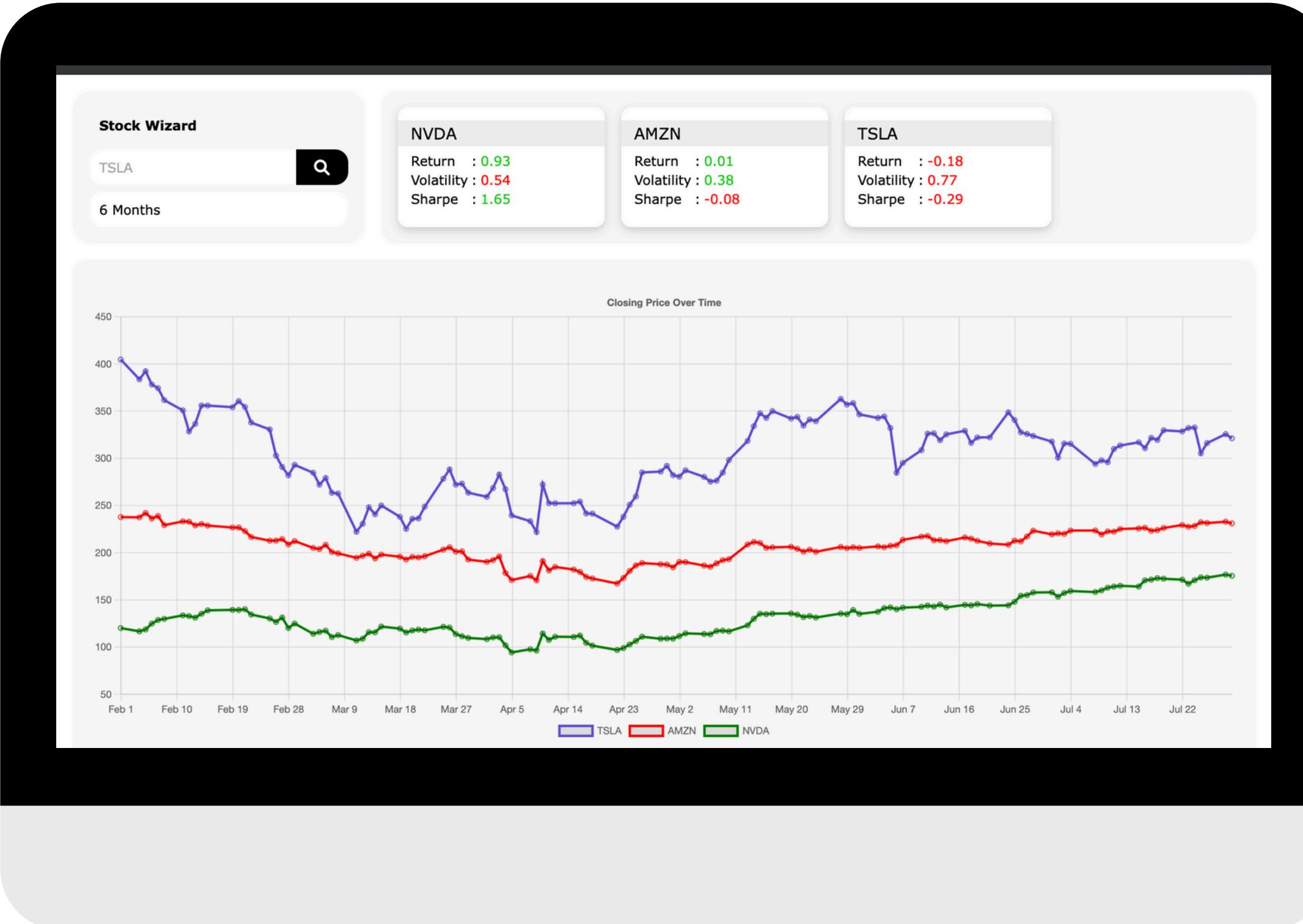


# Stock Wizard

 *Wizardry in Wealth, Magic in Metrics*  
*Lumos Your Financial Future*

# Customizable Portfolio Tracking



- **Add tickers to monitor specific stocks**
- **Adjust timeframes** to suit your analysis period
- **Instantly view key metrics:** annualized return, volatility, and Sharpe ratio

# Deep-Dive Stock Analysis



NVDA

Return : **0.93**  
Volatility : **0.54**  
Sharpe : **1.65**

AMZN

Return : **0.01**  
Volatility : **0.38**  
Sharpe : **-0.08**

TSLA

Return : **-0.18**  
Volatility : **0.77**  
Sharpe : **-0.29**

Focus on individual stocks with dynamic advanced analytics, visualized through an interactive interface.

## Rolling Analytics



## Momentum Profile

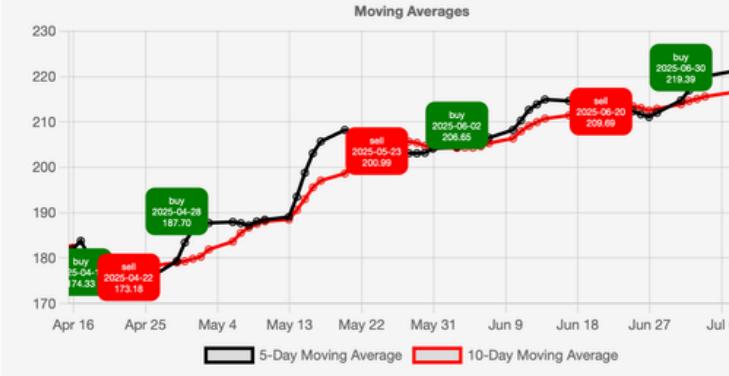
55.4%

## Risk Profile

93.8%

Rolling Analytics

## Moving Averages



## Moving Average Crossover Strategy

buy

Slow moving average crosses fast moving average **30 days** ago on **2025-06-30**.  
The stock was trading at the price of **\$219.3900**.

SMA Crossover Signals

## Best Correlated Symbol

META    0.94

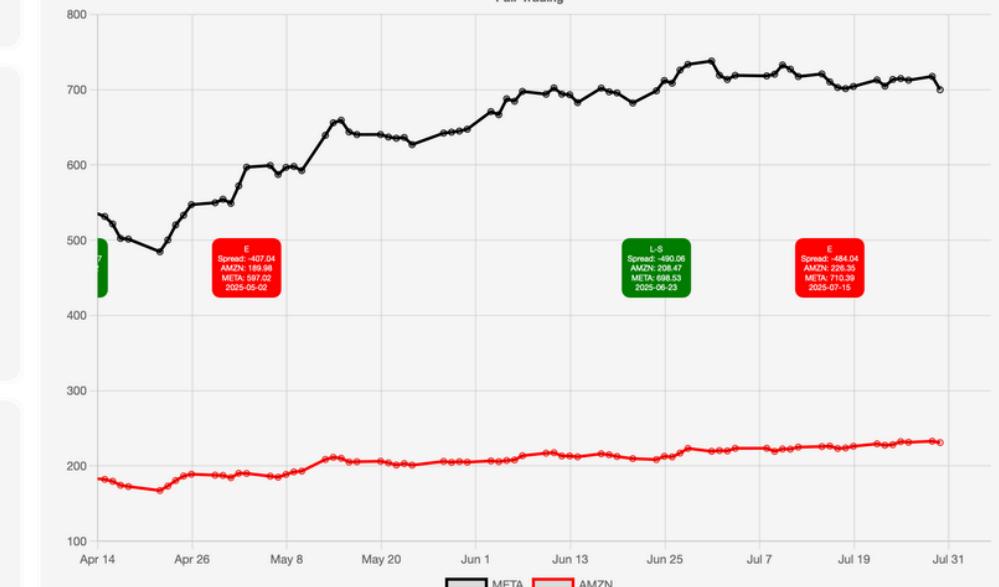
## Price Spread Distribution



## Price Spread Time Series



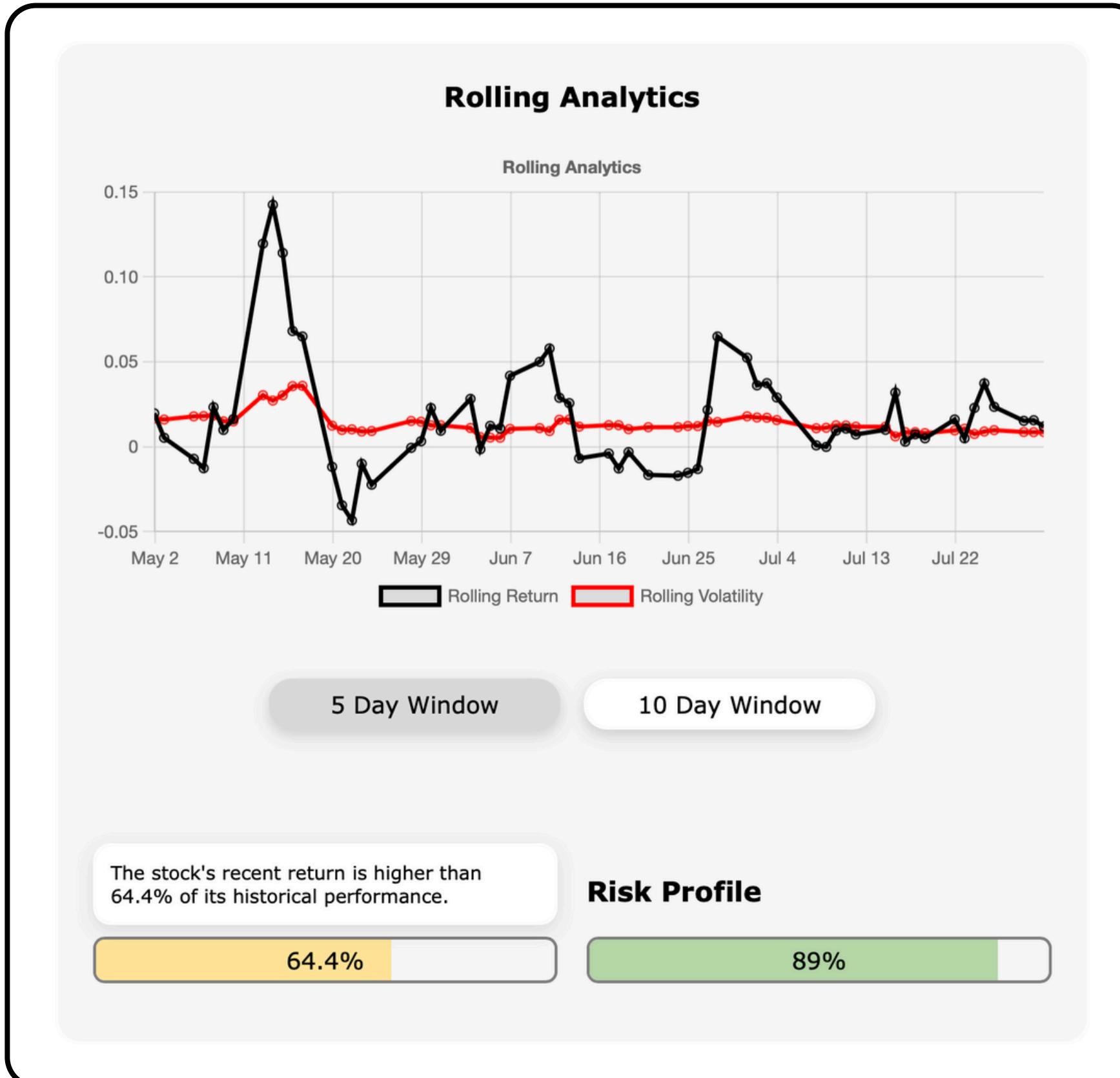
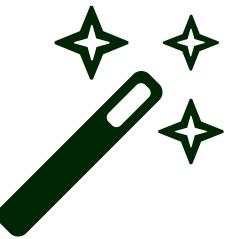
## Pair Trading



A pair trading opportunity has ended on **2025-07-15**.  
AMZN was trading at a price of **\$226.35**; META was trading at a price of **\$710.39**.  
Don't enter the trade until the next signal.

Mean-Reversion Pair Trading Insights

# Rolling Analytics



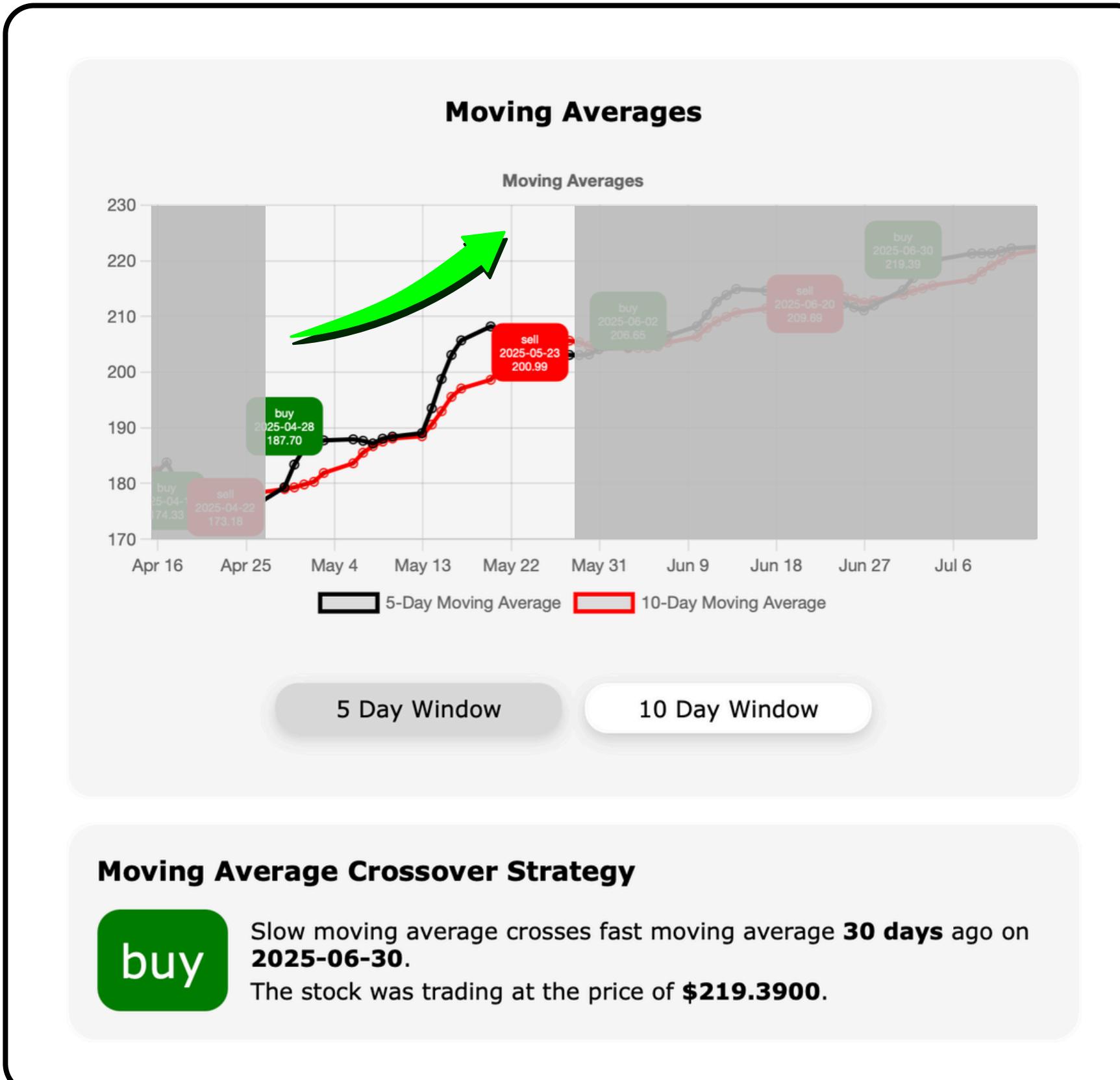
- **Rolling Mean:** Smooths out short-term fluctuations to show the average trend over a moving window.
- **Rolling Volatility:** Measures how much a stock's price varies over time, capturing changing risk levels.

## Score Bar Insights - Example

**64.4% Momentum**

= stock's recent return is higher than 64.4% of its historical performance

# Moving Average Crossover Signals



## Golden Cross - Bullish

short-term MA >  
the long-term MA

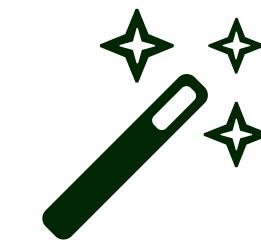
BUY

## Death Cross - Bearish

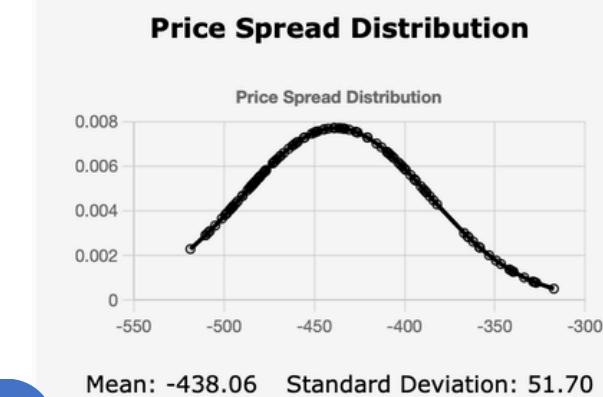
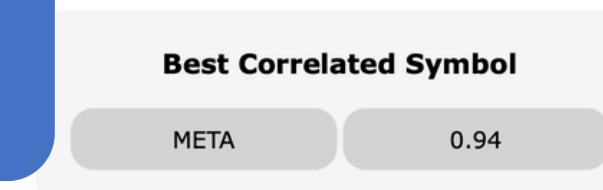
short-term MA <  
the long-term MA

SELL

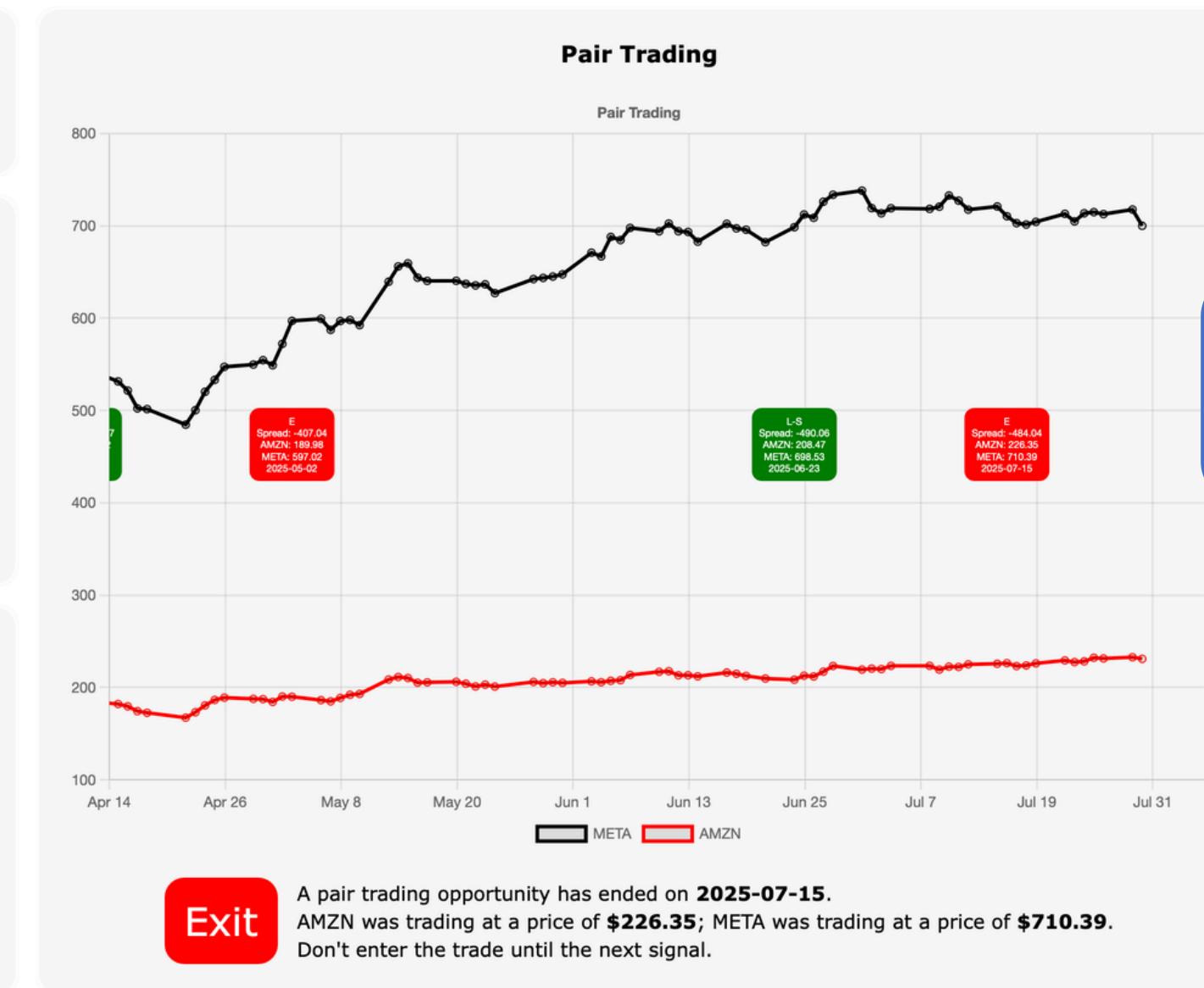
# Mean-Reversion Pair Trading Strategy



Identify the most positively correlated stock



Model the historical price spread between the pair



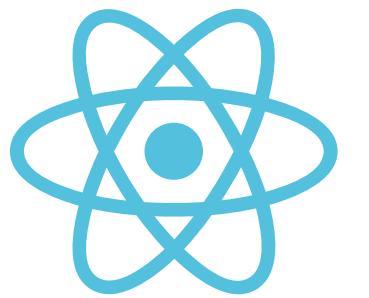
Monitor the price spread and detect opportunity

Signal triggers when **spread deviates  $\pm 1.5$  standard deviations** from the mean, suggesting a **long or short reversion trade**.

# Tech Stack

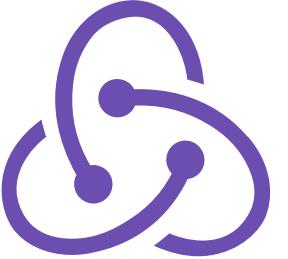


## Frontend



### React JS

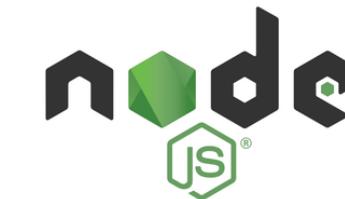
React JS builds reusable components, simplifying the UI development process



### Redux

Redux streamlines state management workflows, increasing scalability

## Backend



### Node JS

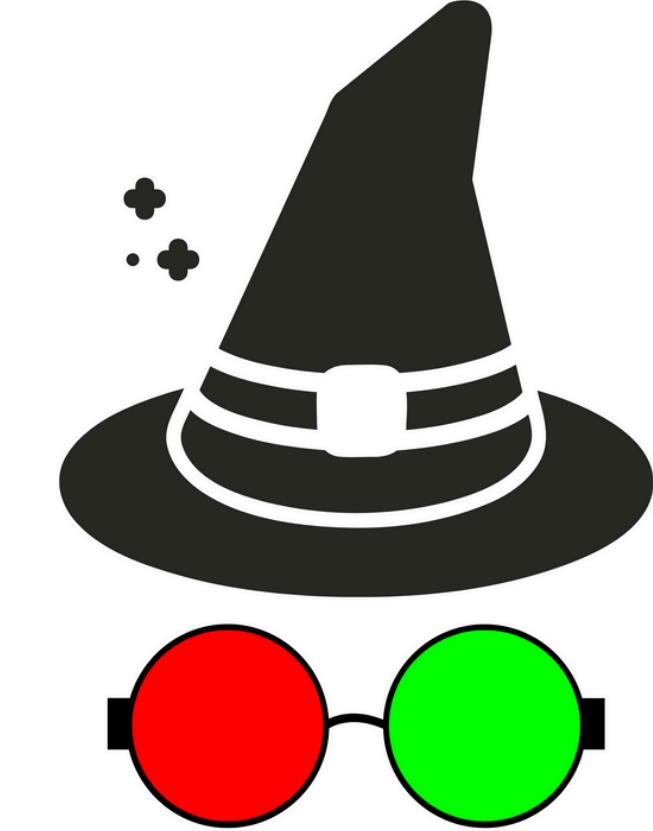
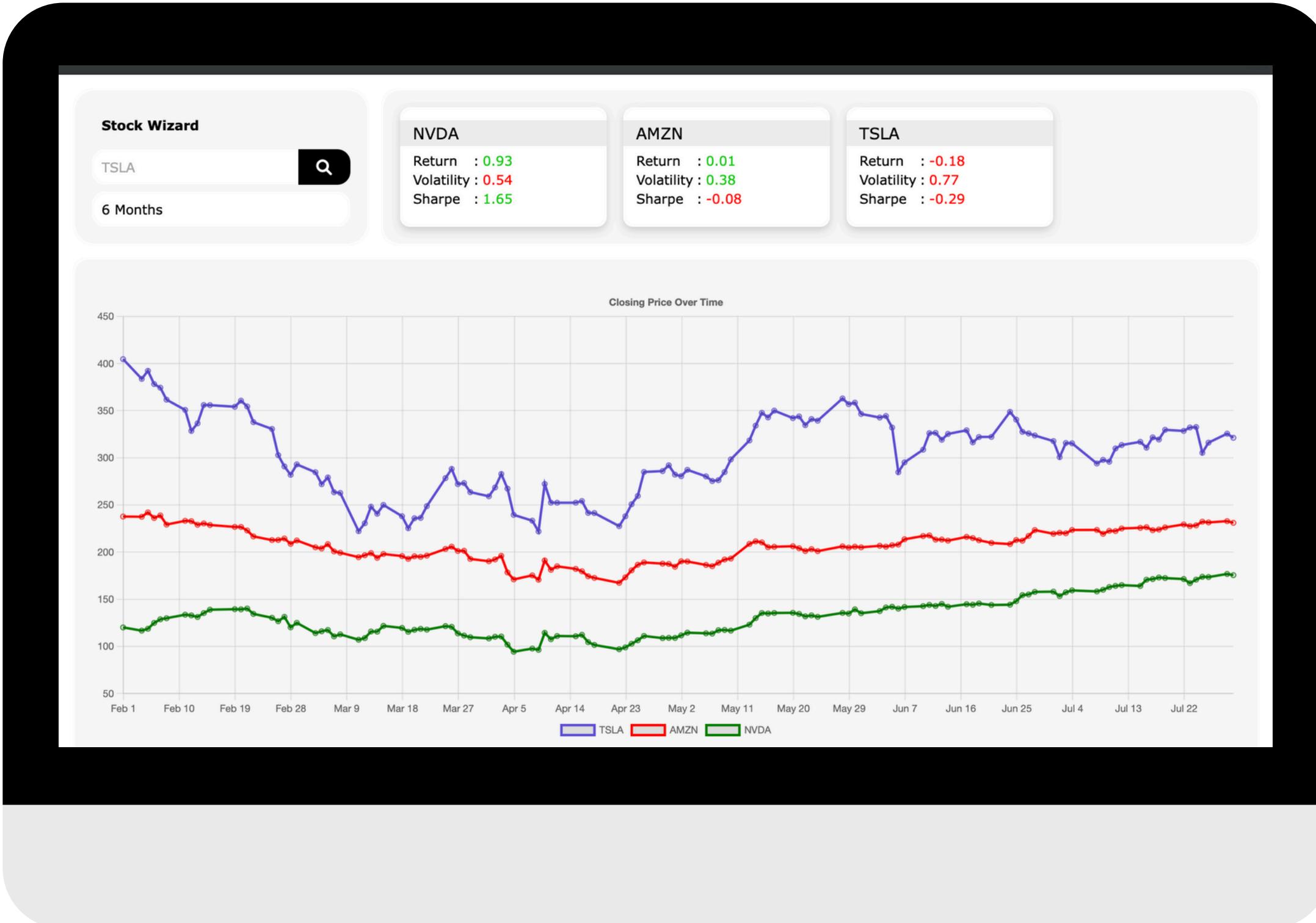
Node JS builds the REST API workflow, facilitating data fetching & backend logics



### yahoo-finance-2

yahoo-finance-2 module is used for fetching of stock data

# Stock Wizard



## Check it out!

<http://stock-wizard-4llm.vercel.app>