



ALGO TRADING

Leveraging Data & Machine Learning to Forecast Market Trends

Understanding Stock Price Prediction

Stock price prediction involves estimating future stock values using historical data, market indicators, and advanced models. It's a critical tool for navigating volatile markets.

This process is vital for investors seeking informed decisions, traders identifying opportunities, and organizations implementing robust risk management strategies.





Why Prediction Matters



Informed Decisions

Empowers investors with insights for strategic portfolio management.



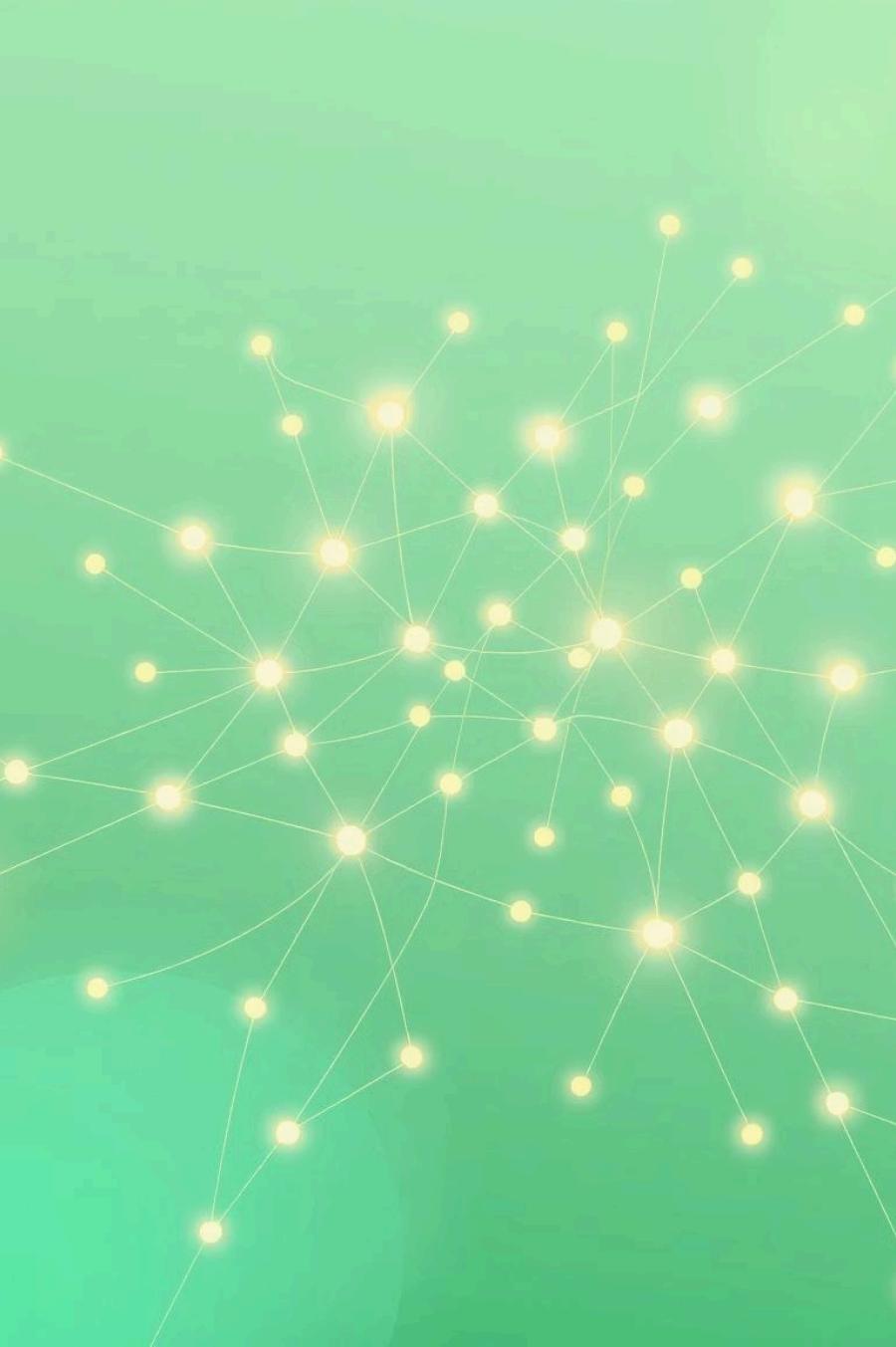
Identify Opportunities

Helps traders pinpoint lucrative entry and exit points in the market.



Manage Risk

Supports the development of robust strategies to mitigate financial exposure.



Core Prediction Approaches

1

Statistical Models

Utilizes traditional methods like Linear Regression, Random Forest for forecasting.

2

Machine Learning

Employs algorithms such as Random Forest, Decision Trees for pattern recognition.

3

Deep Learning

Leverages advanced neural networks, including LSTM and Transformers, for complex data.

Salient Features: Trend Indicators

Our system provides clear trend indicators to guide trading decisions: Buy, Hold, or Sell.



Buy Signal

Indicates an opportune time to enter the market.

Hold Signal

Suggests maintaining current positions, awaiting further confirmation.

Sell Signal

Advises exiting positions to minimize potential losses.



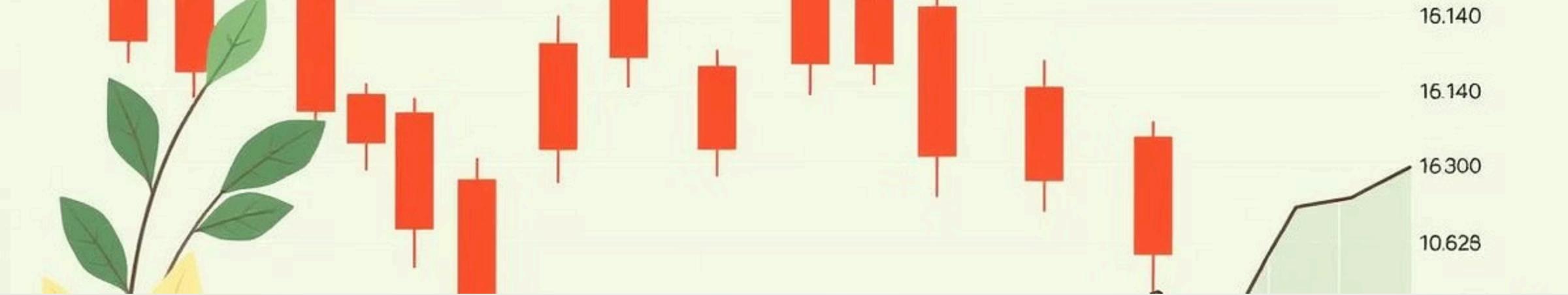
Deep Dive: The Buy Signal

A Buy Signal is generated when the price shows a clear uptrend, characterized by higher highs and higher lows.

- Moving averages (e.g., 50-day) are above longer-term averages (e.g., 200-day).
- Technical indicators like RSI are below 30 (oversold) or MACD shows an upward crossover.

These conditions suggest strong upward momentum and potential for growth.





Hold & Sell Signals

Hold Signal

A Hold Signal occurs when the price moves sideways, indicating a range-bound market without a clear trend.

- Indicators show neutral momentum (RSI ~50, MACD flat).
- Investors typically wait for confirmation before taking action, avoiding premature moves.

Sell Signal

A Sell Signal is triggered when the price enters a downtrend, marked by lower highs and lower lows.

- Moving averages (e.g., 50-day) fall below longer-term averages (e.g., 200-day).
- Technical indicators like RSI are above 70 (overbought) or MACD shows a downward crossover.



Interactive Dashboard

Our intuitive dashboard provides real-time insights and customizable visualizations for your trading analysis.



Data Upload

Seamlessly upload stock data via CSV or API for instant analysis.



Visualize Trends

Explore price trends and moving averages with dynamic, interactive charts.



Auto-Signals

Automatically generate Buy, Hold, and Sell trend signals for quick decision-making.



Real-time Charts

Access live charts with flexible filters to customize your view.



Risk & Profit Calculator

Optimize your trades with our comprehensive risk and profit calculator, ensuring informed decision-making.

Key Inputs

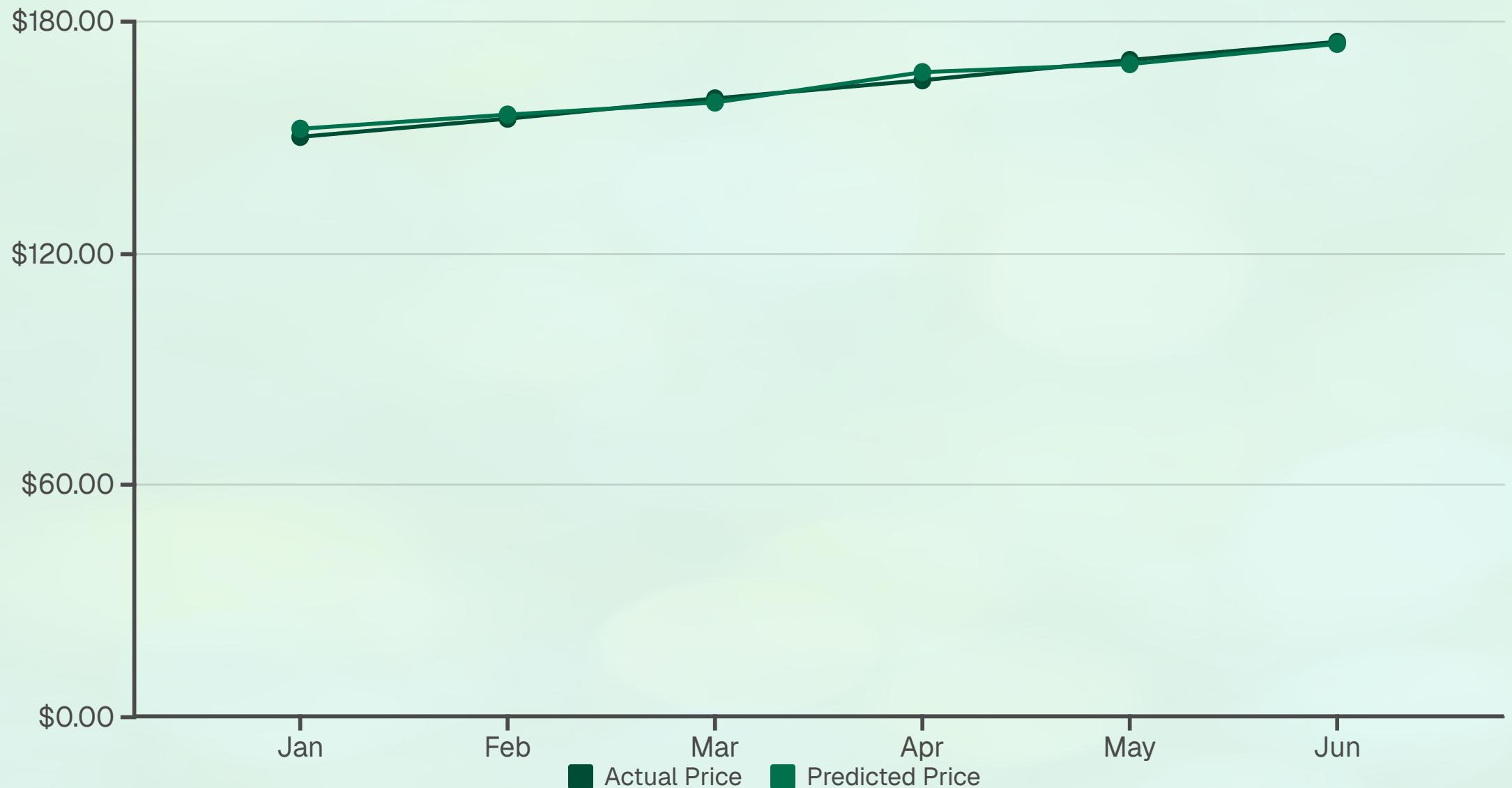
- Entry Price, Stop Loss, Target Price
- Account Balance, Risk % per Trade
- Leverage, Fees

Calculated Outputs

- Position Size (shares/contracts)
- Risk Amount (\$)
- Profit/Loss Scenarios
- Risk-Reward Ratio (R:R)
- Breakeven Price

Actual vs. Predicted Performance

Visually compare our model's predictions against actual historical stock prices for chosen stocks like AAPL.



This line chart illustrates the accuracy of our model (e.g., LSTM / ML + SMA) by comparing its predictions against actual prices over the last six months.