

KRITI 2024

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Trading Strategy Challenge With Options Data

Introduction

Developing a trading strategy that merges technical analysis with options market data poses a significant challenge in modern financial markets. This problem statement aims to create a systematic approach, addressing strategy development, signal generation, risk management, execution, and performance evaluation to optimize trading outcomes

Analysis and insights

Options Market Sentiment

PCR (Put/Call Ratio) indicates options traders' sentiment; a high ratio implies bearishness while a low ratio suggests bullishness aiding in trade decision-making by offering insights into market sentiment.

Related to strategy

Incorporating PCR into the trading strategy allows for opportunistic entries aligned with market sentiment. By combining PCR analysis with technical indicators such as pivot point standard, the strategy aims to capitalize on market sentiment shifts, enhancing trade timing and overall profitability.

Strategy Logic & Signal Generation

Signal Generation Logic

The strategy triggers trade entries when a candle breaches the nearest level of pivot point standard, coinciding with a PCR (Put/Call Ratio) less than 0.7, indicating a potential bullish sentiment shift.

Entry Timing

Trades are initiated at the closing price of the subsequent candle following the breakout, optimizing entry timing to capitalize on emerging market sentiment.

Sell Signal

The strategy triggers a sell signal whenever the closing price of the index crosses the price at which we entered the trade previously and the PCR ratio is more than 1.

Risk Management Measures

1

Stop-loss Placement

Utilize the lowest point of the breaking candle as a stop-loss level to limit potential losses, ensuring trades are promptly exited if price movement invalidates the bullish sentiment.

2

Position Sizing

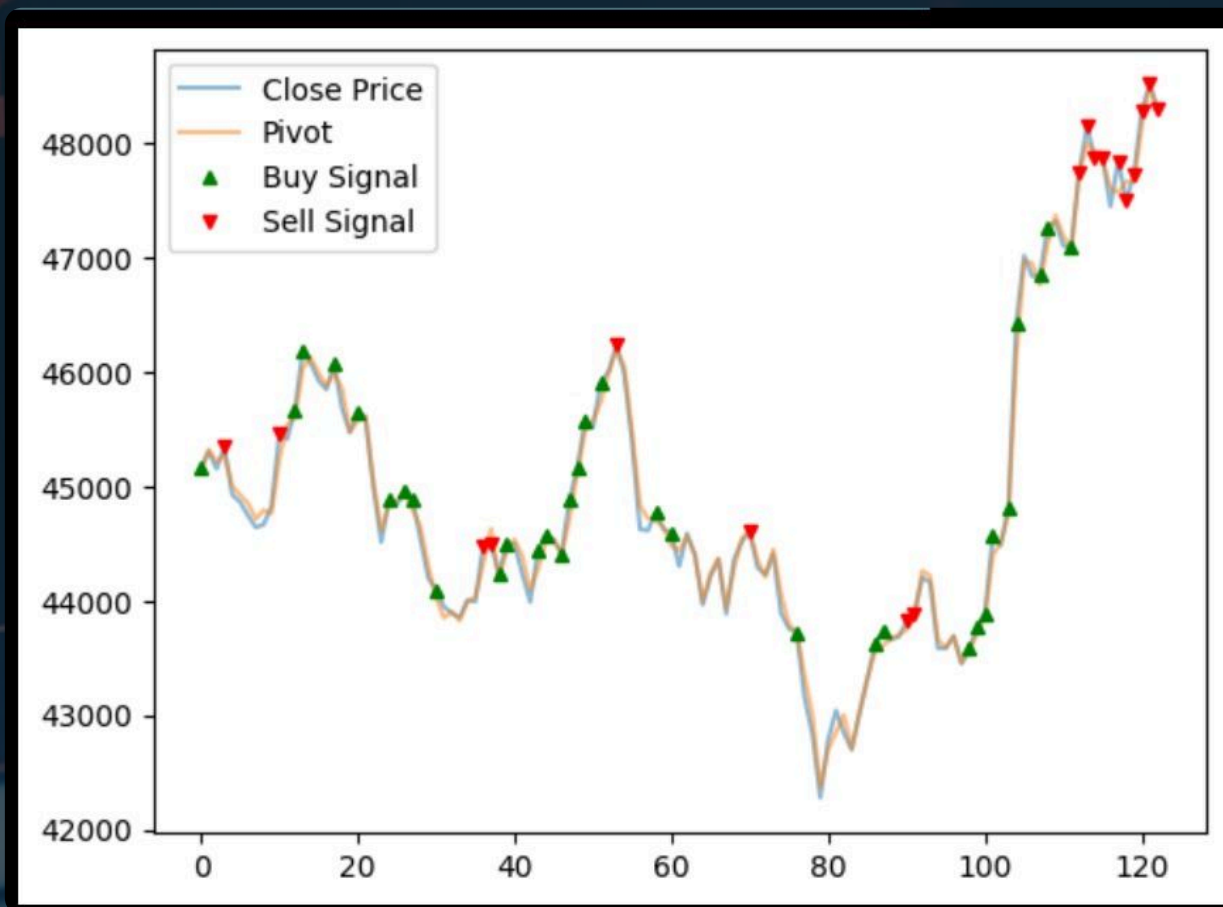
Implement a disciplined approach to position sizing, allocating a predetermined portion of trading capital to each trade to manage overall risk exposure and avoid excessive losses.

3

Trade Monitoring and Adjustment

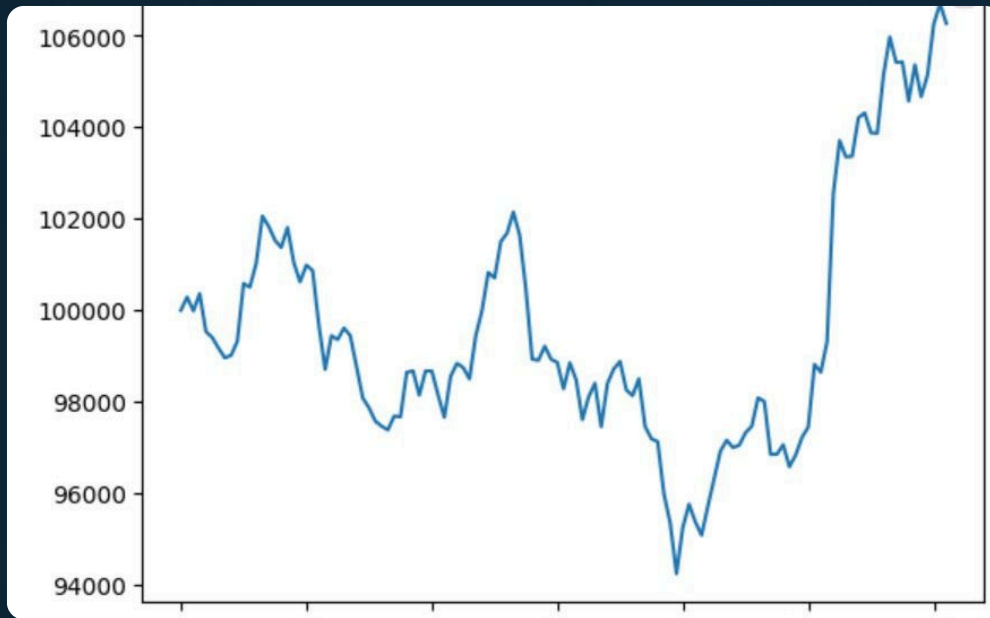
Continuously monitor trade progress and market conditions, being prepared to adjust stop-loss levels or exit trades prematurely if adverse price movements or changing market sentiment warrant risk mitigation actions.

Strategy execution and Backtesting



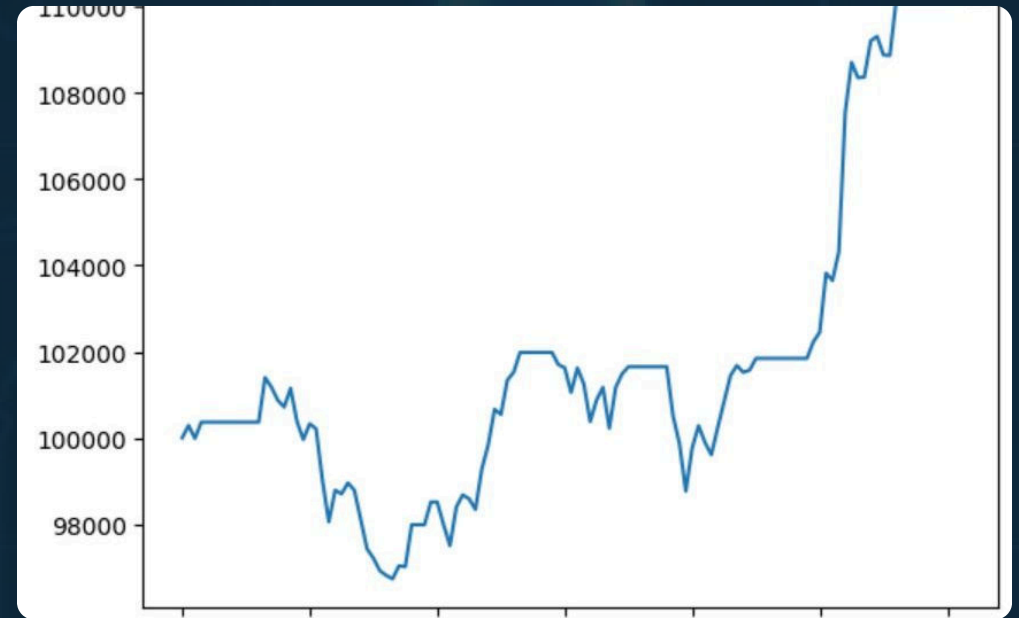
Missing data has been filled using interpolation of prior data in the forward direction.

Performance Metrics



Return = 6.26%

Benchmark Strategy



Return = 10.15%

Our Strategy

Max drawdown = -0.046

Sortino ratio = 1.704

Alpha = 5.75

Annualised sharpe = 1.29



Thank you!

All conditions are met