



FINCLUB ASSIGNMENT

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TRADING STRATEGY: STOCHASTIC MACD MOMENTUM

STOCHASTIC OSCILLATOR (STOCH):

- The Stochastic Oscillator identifies potential overbought and oversold conditions in the market.
- When both %K and %D are below 30, it suggests the market is oversold, indicating a potential buying opportunity.
- Conversely, when both %K and %D are above 70, it suggests the market is overbought, indicating a potential selling opportunity.

MOVING AVERAGE CONVERGENCE DIVERGENCE (MACD):

- MACD helps identify trends and momentum in the market.
- A bullish signal occurs when the MACD line crosses above the Signal line, indicating potential upward momentum.
- A bearish signal occurs when the MACD line crosses below the Signal line, indicating potential downward momentum.

VOLUME MOMENTUM FILTER:

- This strategy incorporates a volume momentum filter to confirm price movements.
- Buy signals are generated when there's an increase in trading volume over a specified lookback period

IMPLEMENTATION:

- The strategy combines signals from the Stochastic Oscillator and MACD indicators.
- Buy signals are triggered when both Stochastic Oscillator and MACD conditions align:
 - Stochastic Oscillator (%K and %D) are below 30, indicating oversold conditions.
 - MACD line is below -2, indicating potential bullish momentum.
- Sell signals are triggered when both Stochastic Oscillator and MACD conditions align:
 - Stochastic Oscillator (%K and %D) are above 70, indicating overbought conditions.
 - MACD line is above 2, indicating potential bearish momentum.
- Position sizing is determined based on an initial investment, and the portfolio's value is tracked over time.
- The strategy returns are calculated based on signals generated, and various performance metrics are computed to evaluate the strategy's effectiveness.

BACKTESTING RESULTS

The Stochastic MACD Momentum strategy aims to capture potential reversals in stock prices by combining signals from the Stochastic Oscillator and MACD indicators. It seeks to exploit opportunities when the market is either oversold or overbought, confirmed by volume momentum, to enter or exit positions, thus attempting to generate profits in both bullish and bearish market conditions.

Summary:

Number of Trades Executed: 24

Max Drawdown: -0.027286106394836862

Win Ratio: 0.7916666666666666

Loss Making Trades: 5

Largest Loss Making Trade: -0.023546361542204686

Largest Profit Making Trade: 0.12906164471951143

Daily Return: 0.00034449927609776705

sharpe ratio: 1.1444493798924689

Total Return: 0.5342705042290208