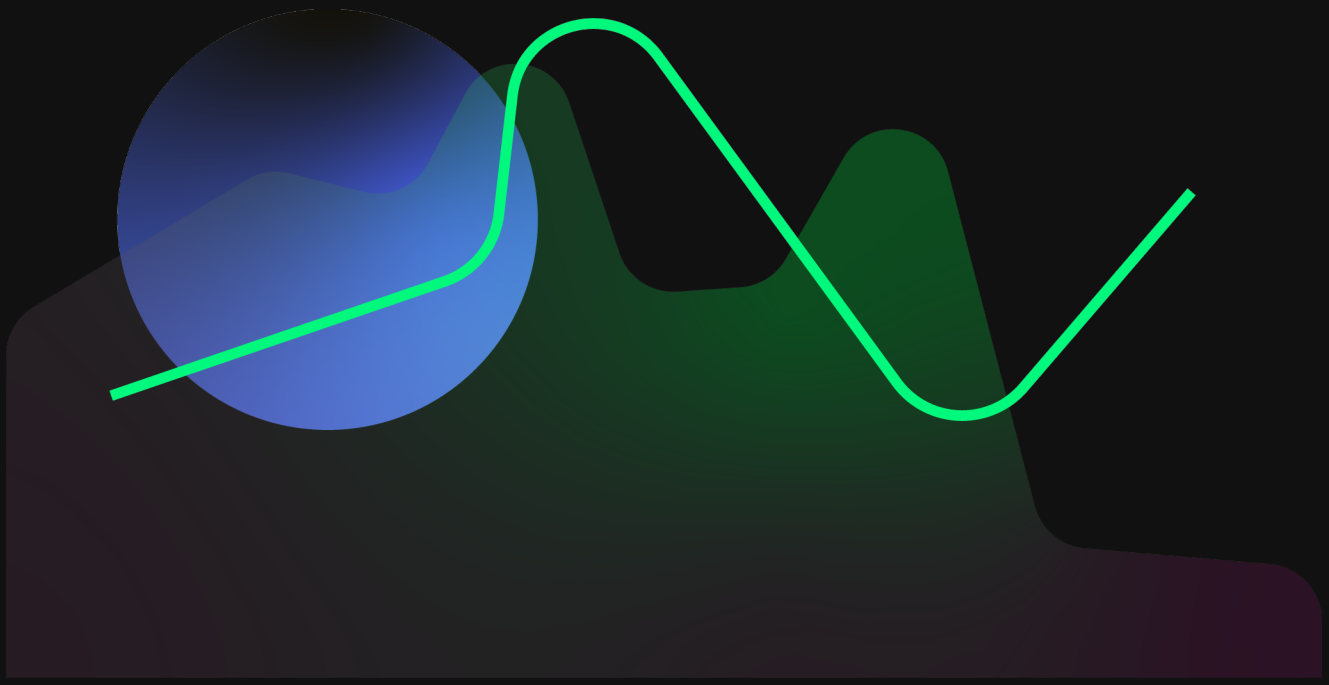
Inter IIT Tech Meet 11.0
IIT Kanpur



QUANT INSTI®
GO ALGO

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EFFICACY OF PRICE ACTION TRADING STRATEGIES IN THE CONTEXT OF THE INDIAN EQUITIES MARKET

Devise strategies, hypothesize and check if your solution works.

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DESCRIPTION

Price action trading strategies are popular trading methods among day traders. It involves forming trading decisions based on recent price movements, excluding (or augmented by) any technical indicators based signals, and without any fundamental analysis. Popular price action tools include technical patterns (reversal and continuation patterns), supports and resistance, elliot waves, candle sticks, trends study etc. In this exercise, we do the following:

1. Develop (or explore existing) tools/ methods for automatic detections of price action signals (as described above).
2. Form a clear hypothesis to test the profitability of price action based strategies in the context of the Indian equities market.
3. Develop a low frequency trading strategy to test the above hypothesis.
4. Use the Blueshift platform to test the above strategy and accept/ reject the hypothesis based on the results.

GUIDELINES

1. The hypothesis should be clear and unambiguous. Good example: "Head and Shoulder strategies are ineffective for liquid, high momentum stocks" (with definition of liquid and high momentum in the submission). Bad example: "Support and resistance based strategies do not really work."
2. The strategy must not be specific to a single or a few stocks - instead the universe should ideally be selected based on rules (e.g. top 10 liquid stocks or top 20 stocks with the lowest momentum over the past 6 months). This is required so that the results can be generalized.

3. The strategy must not trade less than 10 times a month or more than 100 times a day. Allowed traded instruments are cash equities and equity and index futures. It must be long-only for equities and can be long-short for futures. The strategy must be written in Python.

4. The backtesting period will be from July 2018 to July 2021.

5. The logic/tools/methodology used for detecting price action and selecting the assets should be clearly stated.

6. All the assumptions should be explicitly specified.

7. Detailed performance output from Blueshift along with transaction logs.

EVALUATION CRITERIA

Criteria	Example	Max Score
Clarity of the project	How well is the hypothesis defined?	10
Robustness check	Methodology to arrive at list of shortlisted stock Number of stocks considered	10
Quality of tools and logic for detecting price action	Able to spot the price action? What scenario it will fail? No look-ahead bias References	15
Risk management and assumptions	Assumptions about the commissions and transactions cost, slippage etc and Risk management SI & TP, Position Sizing considered	5
Quality of evidence presented to accept/reject the hypothesis	What ratios or metrics are used? Time period of testing Trading frequency	15
Report & final presentation skills		15
Contribution across team members		10
Response to questions from Jury		20

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SUBMISSION

Submission date: Wednesday, 8 Feb. 2023, EOD

Submission format: Word document

Would there be a Presentation from the participants? Is any particular duration expected? Final presentation would be required for jury to accurately evaluate and ask questions if any. The presentation needs to be of 8-10 minutes followed by Q&A of 5-10 minutes.

Presentation Date/Time: TBD.

RESOURCES

https://blog.quantinsti.com/price-action-trading/

https://blog.quantinsti.com/candlestick-patterns-meaning/

https://blueshift.quantinsti.com/docs/quickstart/