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Low-Risk, High-Return Automated Strategy to Surpass Fixed Deposit Returns.

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Objective:

To develop and automate a Risk-averse options trading strategy using Tradetron to achieve consistent returns while managing risk, surpassing the performance of traditional investment options like fixed deposits (F.D).

Achieving a return of 18-20% p.a from Nifty and BankNifty.

Project Overview:

- The project aimed to develop a robust options trading strategy with a focus on risk-adjusted returns and capital preservation.
- By utilizing technical and fundamental analysis, the objective was to create an automated system that could identify favorable trade opportunities and execute them efficiently.
- The strategy was designed to provide investors with attractive returns while maintaining a comparable level of risk to F.D.

Methodology:

1. **Strategy Development:**
 - Conducted thorough research on option trading strategies, risk management techniques, and market analysis to identify potential opportunities.

- Leveraged quantitative analysis and statistical modeling to design a proprietary options trading strategy.
- Emphasized risk-adjusted returns, capital preservation, and the ability to withstand market fluctuations.
- Utilized backtesting on historical data to evaluate the strategy's performance under various market conditions.

2. **Automation using Tradetron:**

- Employed the Tradetron platform to automate the execution of the option trading strategy.
- Integrated the strategy's buy/sell signals, position sizing, and risk management rules into the Tradetron framework.
- Configured parameters within Tradetron to ensure consistent and disciplined trading.
- Conducted extensive testing and optimization to fine-tune the strategy's performance.

Results and Achievements:

- The automated option trading strategy achieved an annual return of 23%, outperforming traditional fixed deposits.
- Demonstrated effective risk management with a maximum drawdown of only Rs.2000, showcasing capital preservation capabilities.
- Recorded key performance metrics such as net profit, winning days, losing days, risk-reward ratio, and expectancy ratio.
- Provided detailed analysis of backtested data, including trade-by-trade results, equity curve, and various risk metrics.
- This Strategy is suited for highly Risk-averse investors who want a consistently moderately high return with Low risk.

Backtested Data and Performance:

a) Cumulative Profit/Loss Curve:



b) Drawdown:



c) Profit/Loss (Monthly Breakup):

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Max Drawdown	Days for Max Drawdown	*Yearly Return/MaxDD
2022	₹ 6,018	₹ 7,163	₹ 5,015	₹ 7,558	₹ 7,167	₹ 7,710	₹ 4,337	₹ 5,668	₹ 5,147	₹ 8,901	₹ 4,245	₹ 4,166	₹ 72,469	₹ -1,573	2 [05/07/2022 to 06/07/2022]	46.43
2023	₹ 7,073	₹ 4,680	₹ 5,518	₹ 2,302	₹ 3,297	₹ 3,783	₹ 0	₹ 0	₹ 0	₹ 0	₹ 0	₹ 0	₹ 27,555	₹ -1,831	8 [13/03/2023 to 20/03/2023]	32.3

d) Key Performance:

Overall Profit	₹ 1,00,025.05	₹ 48,443.75	₹ 53,580.05
AlgoTrade.In			
No. of Trades(Periods)	724(362)	362	362
AlgoTrade.In			
Average Profit per Period	₹ 276.31	₹ 133.3	₹ 148.01
AlgoTrade.In			
Win % (Periods)	75.44	67.40	67.13
AlgoTrade.In			
Loss % (Periods)	24.55	32.60	32.87
AlgoTrade.In			
Average Profit on Winning Periods	₹ 496.05	₹ 257.9	₹ 350.38
AlgoTrade.In			
Average Loss on Losing Periods	₹ -247.35	₹ -139.89	₹ -183.13
AlgoTrade.In			
Max Profit in Single Period	₹ 3,032.5	₹ 1,177.5	₹ 1,148.75
AlgoTrade.In			
Max Loss in Single Period	₹ -1,348.25	₹ -995	₹ -796.3
AlgoTrade.In			
Max Drawdown	₹ -1,821.3	₹ -1,130.05	₹ -1,281.3
AlgoTrade.In			
Days of Max Drawdown	8 [18/03/2023 to 26/03/2023]	7 [04/01/2023 to 11/01/2023]	6 [13/03/2023 to 20/03/2023]
AlgoTrade.In			
Return/MaxDD	37.33	28.09	29.04
AlgoTrade.In			
Reward to Risk Ratio	2.01	1.85	1.84
AlgoTrade.In			
Expectancy Ratio	1.12	0.92	0.91
AlgoTrade.In			
Max Win Streak (Periods)	13	14	12
AlgoTrade.In			
Max Losing Streak (Periods)	3	5	7
AlgoTrade.In			
Max days in a drawdown(Periods)	11	12	12
AlgoTrade.In			

Conclusion:

The successful development and automation of the options trading strategy using Tradetron demonstrate advanced quantitative analysis skills, strategy development expertise, and algorithmic trading proficiency. The strategy's ability to outperform fixed deposits while effectively managing risk validates its potential as an alternative investment approach.

Disclaimer: Please note that the results presented in this project are based on historical data and backtesting. It is important to understand that future market uncertainties, taxes, and transaction costs can impact the actual performance of the options trading strategy. While extensive efforts have been made to develop a robust and profitable approach, there is no guarantee of achieving the same results in live trading.