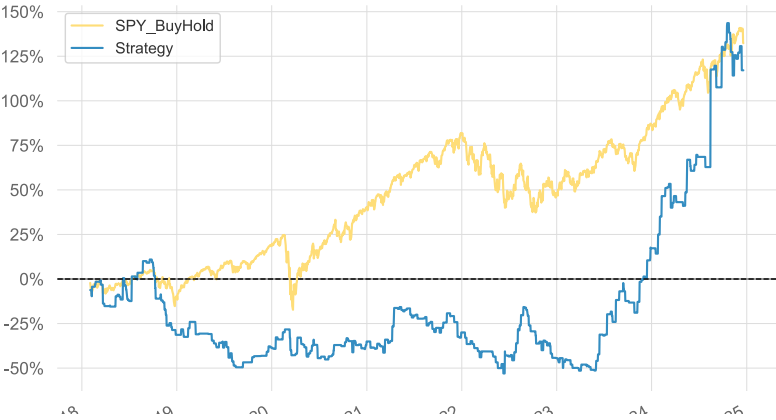


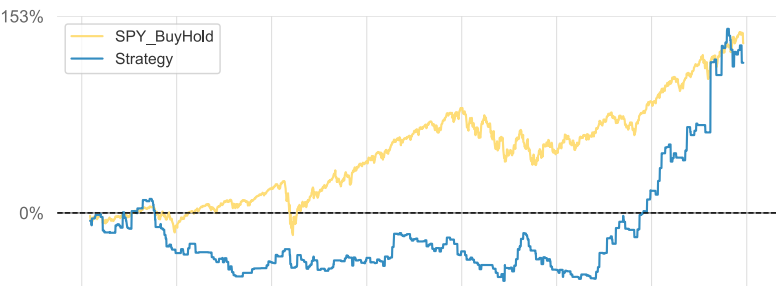
STRAT Options Strategy vs SPY Buy-and-Hold 2 Feb, 2018 - 19 Dec, 2024

Benchmark is SPY_BUYHOLD | Generated by [QuantStats](#) (v. 0.0.77)

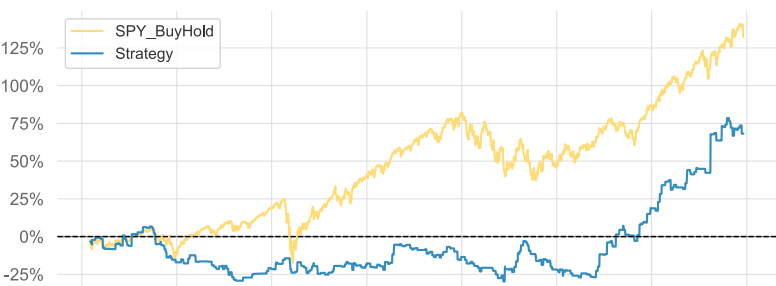
Cumulative Returns vs Benchmark



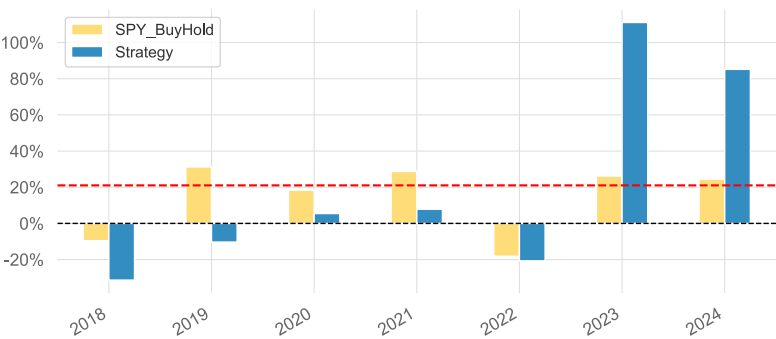
Cumulative Returns vs Benchmark (Log Scaled)



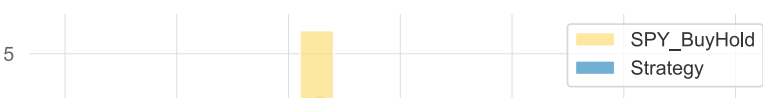
Cumulative Returns vs Benchmark (Volatility Matched)



EOY Returns vs Benchmark



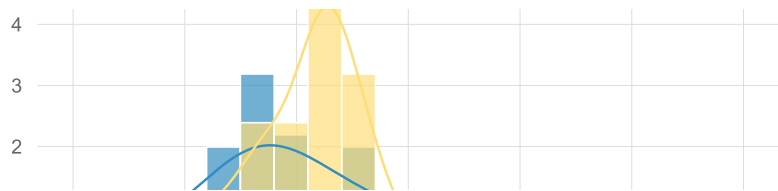
Distribution of Monthly Returns



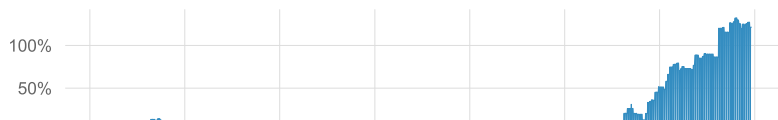
Key Performance Metrics

Metric	SPY_BuyHold	Strategy
Risk-Free Rate	0.0%	0.0%
Time in Market	97.0%	18.0%
Cumulative Return	132.32%	117.12%
CAGR %	12.56%	11.5%
Sharpe	0.71	0.47
Prob. Sharpe Ratio	96.94%	90.97%
Smart Sharpe	0.7	0.47
Sortino	0.99	0.87
Smart Sortino	0.98	0.86
Sortino/ $\sqrt{2}$	0.7	0.61
Smart Sortino/ $\sqrt{2}$	0.69	0.61
Omega	1.23	1.23
Max Drawdown	-33.72%	-57.65%
Max DD Date	2020-03-23	2022-06-10
Max DD Period Start	2020-02-20	2018-09-27
Max DD Period End	2020-08-07	2023-12-26
Longest DD Days	708	1917
Volatility (ann.)	19.23%	36.05%
R ²	0.0	0.0
Information Ratio	0.01	0.01
Calmar	0.37	0.2
Skew	-0.55	4.12
Kurtosis	12.11	50.3
Expected Daily	0.05%	0.04%
Expected Monthly	1.02%	0.94%
Expected Yearly	12.8%	11.71%
Kelly Criterion	-0.26%	4.1%
Risk of Ruin	0.0%	0.0%
Daily Value-at-Risk	-1.94%	-3.67%
Expected Shortfall (cVaR)	-5.01%	-5.01%

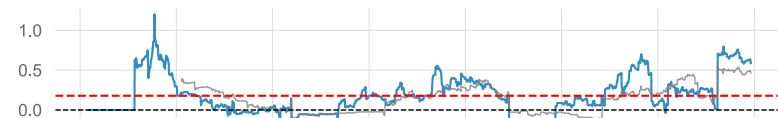
Max Consecutive Wins	10	2
Max Consecutive Losses	8	2



Daily Returns (Cumulative Sum)



Rolling Beta to Benchmark



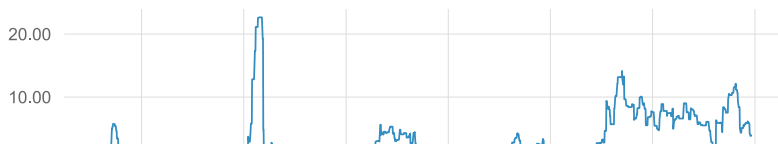
Rolling Volatility (6-Months)



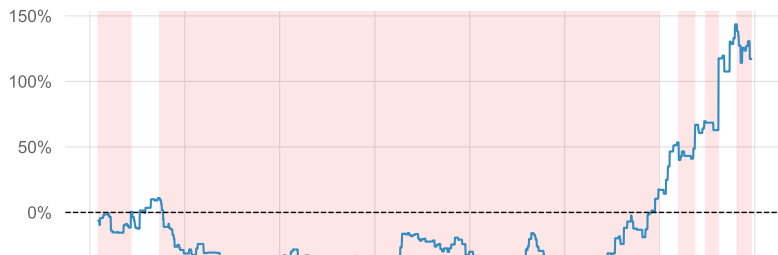
Rolling Sharpe (6-Months)



Rolling Sortino (6-Months)



Strategy - Worst 5 Drawdown Periods



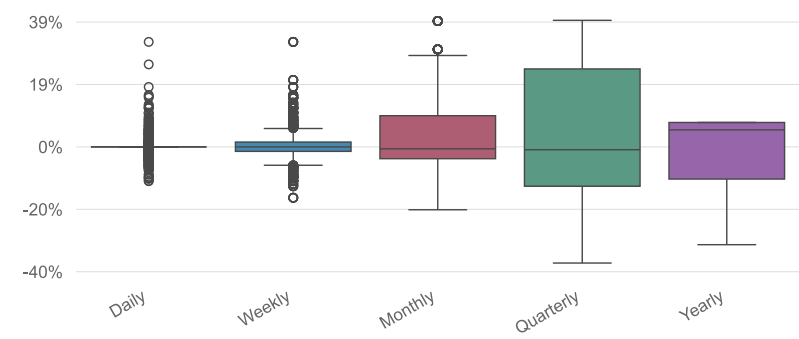
Underwater Plot



Metric	SPY_BuyHold	Strategy
Gain/Pain Ratio	0.15	0.23
Gain/Pain (1M)	0.79	0.42
Payoff Ratio	0.81	1.26
Profit Factor	1.15	1.23
Common Sense Ratio	1.02	0.96
CPC Index	0.51	0.72
Tail Ratio	0.89	0.78
Outlier Win Ratio	8.05	14.95
Outlier Loss Ratio	5.83	1.53
MTD	-2.73%	-4.36%
3M	4.72%	4.61%
6M	7.53%	32.3%
YTD	24.47%	85.18%
1Y	25.35%	96.52%
3Y (ann.)	10.08%	47.49%
5Y (ann.)	13.4%	25.85%
10Y (ann.)	12.56%	11.5%
All-time (ann.)	12.56%	11.5%
Best Day	9.06%	33.64%
Worst Day	-10.94%	-10.98%
Best Month	12.7%	40.33%
Worst Month	-12.49%	-20.15%
Best Year	31.22%	111.09%
Worst Year	-18.18%	-31.34%
Avg. Drawdown	-1.94%	-10.52%
Avg. Drawdown Days	18	195
Recovery Factor	2.89	2.11
Ulcer Index	0.08	0.36
Serenity Index	0.89	0.13
Avg. Up Month	4.46%	12.31%
Avg. Down Month	-5.01%	-7.66%
Win Days	55.15%	46.58%
Win Month	66.27%	42.68%
Win Quarter	75.0%	50.0%
Win Year	71.43%	57.14%
Beta	-	0.09
Alpha	-	0.16
Correlation	-	4.77%
Treynor Ratio	-	1308.45%

2019	10.1	12.15	8.88	8.88	11.92	8.19	8.12	10.88	8.88	8.19	8.88	8.12
2020	7.27	8.56	-20.15	10.84	-6.05	-6.82	-1.30	14.78	-1.04	4.54	-3.44	3.28
2021	-5.27	1.03	3.55	29.29	-0.61	-3.82	-2.27	-3.25	-3.49	4.08	4.85	-11.59
2022	-9.33	-3.58	-3.01	-0.06	-15.75	13.05	13.12	31.26	-15.82	-8.15	-3.37	-11.42
2023	-3.78	-2.72	-6.62	5.77	-5.30	40.33	19.75	13.93	-5.85	-7.51	22.89	17.68
2024	8.66	20.28	8.88	8.88	10.88	1.87	8.12	21.88	1.88	1.88	8.88	1.88

Strategy - Return Quantiles



Trade-Level Metrics

<div>\$26,972</div> <div>Total P&L (107.9%)</div>	<div>365</div> <div>Total Trades</div>	<div>46.3%</div> <div>Win Rate (169W / 196L)</div>
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Best & Worst Trades

Best Trade	\$7,604	SPY 2-2 Up	2024-08-06
Worst Trade	-\$3,296	SPY 2D-1-2D	2024-11-04

Win/Loss Analysis

Average Win	\$848	Max Win Streak	9 trades
Average Loss	-\$594	Max Loss Streak	8 trades
Profit Factor	1.23		

CALLs vs PUTs

Direction	Trades	P&L	Win Rate
CALLs (Bullish)	336	\$33,525	78.9%
PUTs (Bearish)	29	-\$6,553	62.1%

Performance by Timeframe

EOY Returns vs Benchmark

Year	SPY_BuyHold	Strategy	Multiplier	Won
2018	-11.14%	-31.34%	2.81	-
2019	31.22%	-10.31%	-0.33	-
2020	18.33%	5.46%	0.30	-
2021	28.73%	7.83%	0.27	-
2022	-18.18%	-20.68%	1.14	-
2023	26.18%	111.09%	4.24	+
2024	24.47%	85.18%	3.48	+

Worst 10 Drawdowns

Started	Recovered	Drawdown	Days
2018-09-27	2023-12-26	-57.65%	1917
2018-02-02	2018-06-07	-15.49%	126
2018-06-14	2018-07-11	-12.80%	28
2024-10-25	2024-12-19	-12.08%	56
2024-03-15	2024-05-15	-8.73%	62
2024-09-06	2024-09-26	-5.52%	21
2024-06-26	2024-08-14	-4.05%	50
2024-05-29	2024-06-20	-3.74%	23
2023-12-29	2024-01-25	-2.91%	28
2018-07-27	2018-08-02	-1.73%	7

Timeframe	Trades	P&L	Win Rate
1D	307	\$29,893	77.2%
1W	47	\$-656	80.9%
1M	11	\$-2,265	72.7%

Performance by Symbol

Symbol	Trades	P&L	Win Rate
SPY	365	\$26,972	77.5%

Performance by Pattern Type

Pattern	Trades	P&L	Win Rate
2-2 Up	218	\$20,271	78.4%
2U-1-2U	40	\$9,045	85.0%
2D-1-2U	28	\$5,567	82.1%
2U-1-2D	32	\$1,058	71.9%
3-1-2 Down	9	\$161	44.4%
3-1-2 Up	18	\$-2,416	77.8%
2D-1-2D	20	\$-6,714	70.0%

Starting Capital: \$25,000 | Generated by ATLAS STRAT Options Backtest