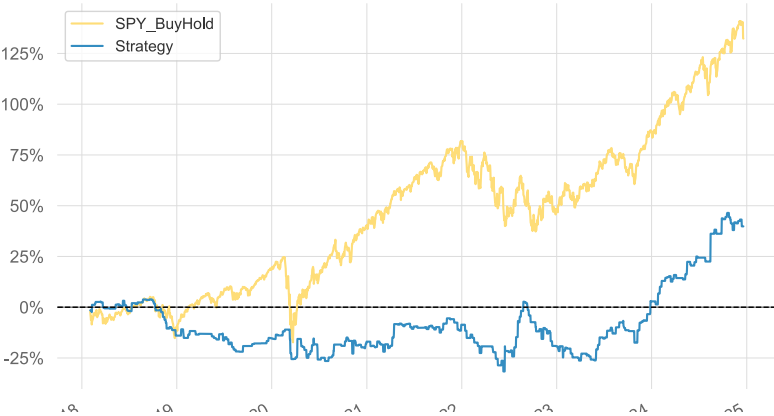


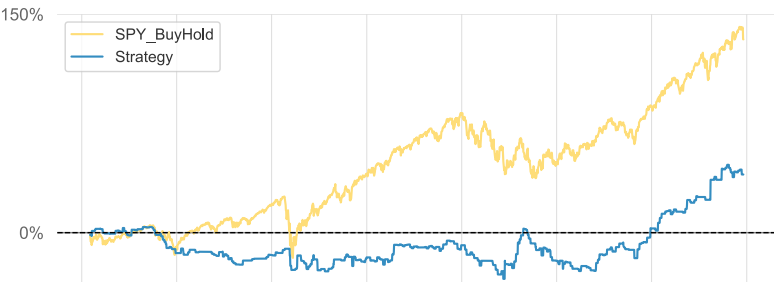
STRAT Options Strategy vs SPY Buy-and-Hold 2 Feb, 2018 - 19 Dec, 2024

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

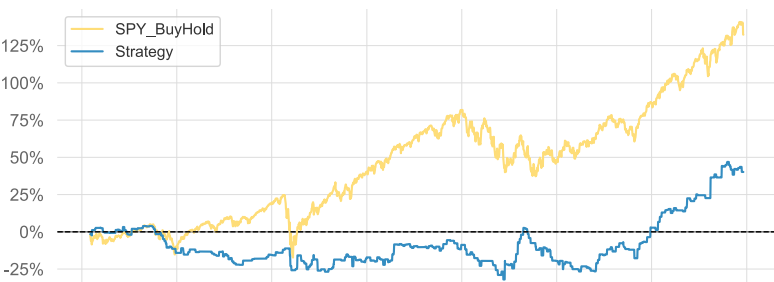
Cumulative Returns vs Benchmark



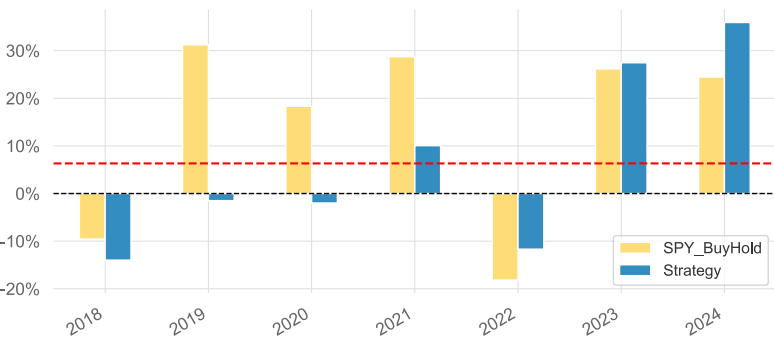
Cumulative Returns vs Benchmark (Log Scaled)



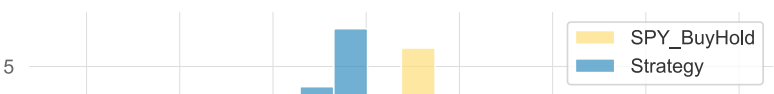
Cumulative Returns vs Benchmark (Volatility Matched)



EOY Returns vs Benchmark



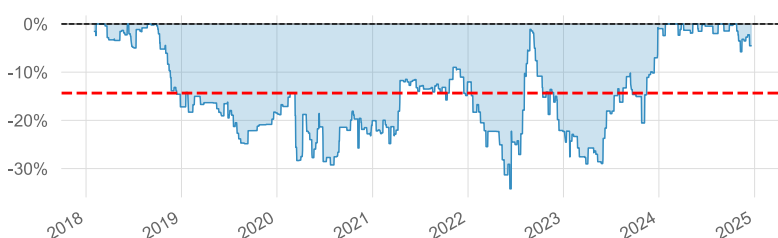
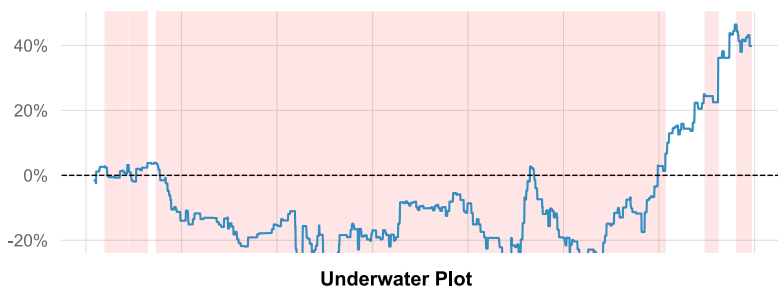
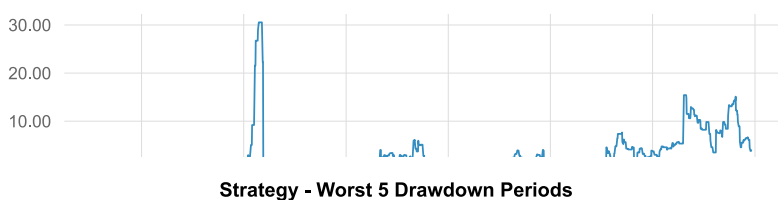
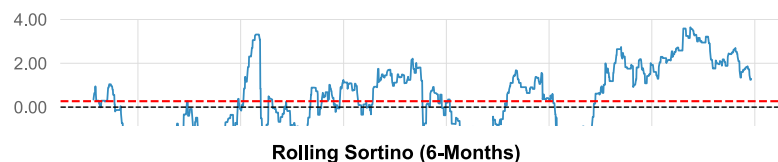
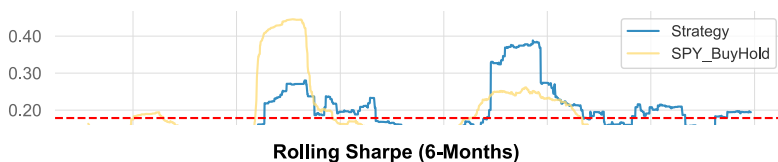
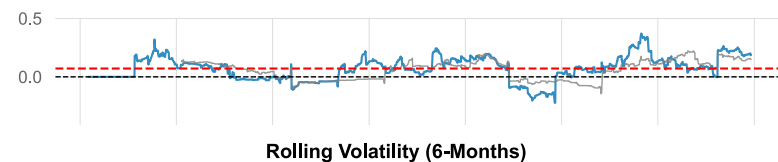
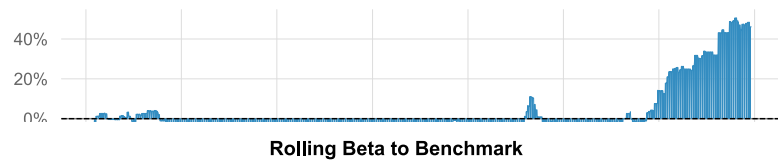
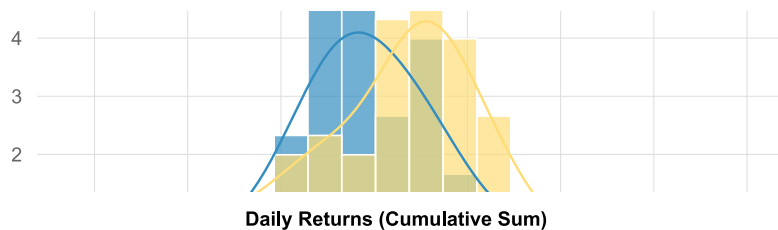
Distribution of Monthly Returns



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%	39.83%
CAGR %	12.56%	4.82%
Sharpe	0.71	0.34
Prob. Sharpe Ratio	96.94%	82.58%
Smart Sharpe	0.7	0.34
Sortino	0.99	0.57
Smart Sortino	0.98	0.56
Sortino/ $\sqrt{2}$	0.7	0.4
Smart Sortino/ $\sqrt{2}$	0.69	0.4
Omega	1.16	1.16
Max Drawdown	-33.72%	-34.2%
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	2024-01-25
Longest DD Days	708	1947
Volatility (ann.)	19.23%	19.0%
R ²	0.0	0.0
Information Ratio	-0.02	-0.02
Calmar	0.37	0.14
Skew	-0.55	3.06
Kurtosis	12.11	48.97
Expected Daily	0.05%	0.02%
Expected Monthly	1.02%	0.4%
Expected Yearly	12.8%	4.91%
Kelly Criterion	-0.26%	1.26%
Risk of Ruin	0.0%	0.0%
Daily Value-at-Risk	-1.94%	-1.94%
Expected Shortfall (cVaR)	-3.67%	-3.67%

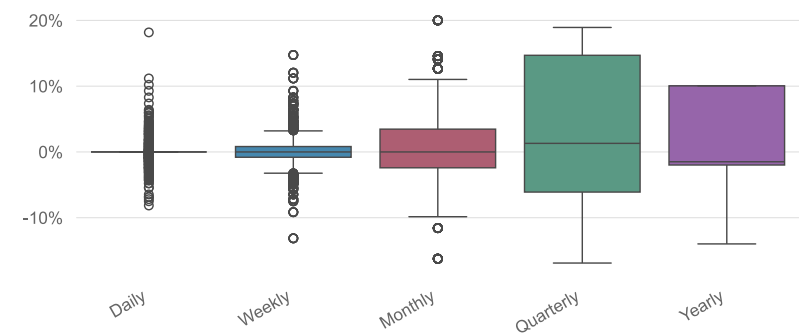
Max Consecutive Wins	10	2
Max Consecutive Losses	8	2



Metric	SPY_BuyHold	Strategy
Gain/Pain Ratio	0.15	0.16
Gain/Pain (1M)	0.79	0.31
Payoff Ratio	0.81	1.18
Profit Factor	1.15	1.16
Common Sense Ratio	1.02	1.24
CPC Index	0.51	0.64
Tail Ratio	0.89	1.07
Outlier Win Ratio	5.0	18.33
Outlier Loss Ratio	4.2	2.06
MTD	-2.73%	-1.84%
3M	4.72%	2.67%
6M	7.53%	14.43%
YTD	24.47%	35.92%
1Y	25.35%	44.76%
3Y (ann.)	10.08%	16.37%
5Y (ann.)	13.4%	9.89%
10Y (ann.)	12.56%	4.82%
All-time (ann.)	12.56%	4.82%
Best Day	9.06%	18.18%
Worst Day	-10.94%	-8.14%
Best Month	12.7%	20.01%
Worst Month	-12.49%	-16.24%
Best Year	31.22%	35.92%
Worst Year	-18.18%	-13.98%
Avg. Drawdown	-1.96%	-5.05%
Avg. Drawdown Days	19	194
Recovery Factor	2.89	1.35
Ulcer Index	0.08	0.17
Serenity Index	0.55	0.13
Avg. Up Month	4.23%	5.3%
Avg. Down Month	-4.88%	-4.1%
Win Days	55.15%	46.58%
Win Month	66.27%	45.12%
Win Quarter	75.0%	50.0%
Win Year	71.43%	42.86%
Beta	-	0.03
Alpha	-	0.06
Correlation	-	2.55%
Treynor Ratio	-	1581.15%

2019	1.55	3.35	1.55	5.00	2.71	1.72	1.55	5.75	5.00	1.55	5.11	5.71
2020	1.61	3.35	-16.24	8.33	-3.02	-5.20	-0.97	11.03	-0.80	3.02	-2.69	2.33
2021	-2.51	0.79	-1.79	14.08	0.09	-1.11	-0.71	0.76	-0.35	1.89	2.39	-2.90
2022	-7.15	-2.68	-2.23	-0.04	-11.58	9.14	9.52	20.01	-9.52	-3.67	-2.45	-7.27
2023	-2.60	-1.85	-4.46	3.80	-3.56	14.58	6.35	2.91	-4.18	-6.92	12.65	10.65
2024	0.74	7.50	4.00	4.04	5.00	0.05	1.50	10.00	4.00	0.10	0.17	4.04

Strategy - Return Quantiles



EOY Returns vs Benchmark

Year	SPY_BuyHold	Strategy	Multiplier	Won
2018	-11.14%	-13.98%	1.26	-
2019	31.22%	-1.49%	-0.05	-
2020	18.33%	-1.99%	-0.11	-
2021	28.73%	10.05%	0.35	-
2022	-18.18%	-11.68%	0.64	+
2023	26.18%	27.46%	1.05	+
2024	24.47%	35.92%	1.47	+

Worst 10 Drawdowns

Started	Recovered	Drawdown	Days
2018-09-27	2024-01-25	-34.20%	1947
2024-10-25	2024-12-19	-5.78%	56
2018-06-14	2018-08-23	-4.98%	71
2018-03-15	2018-06-07	-3.42%	85
2018-02-02	2018-02-08	-2.42%	7
2024-03-15	2024-03-26	-2.34%	12
2024-06-26	2024-08-14	-1.99%	50
2024-04-05	2024-05-09	-1.93%	35
2024-05-29	2024-06-20	-1.52%	23
2024-09-06	2024-09-26	-1.46%	21

Trade-Level Metrics

\$9,380

Total P&L (37.5%)

365

Total Trades

46.3%

Win Rate (169W / 196L)

Best & Worst Trades

Best Trade	\$3,106	SPY 2D-1-2D	2022-06-09
Worst Trade	-\$1,563	SPY 2D-1-2D	2020-10-28

Win/Loss Analysis

Average Win	\$448	Max Win Streak	9 trades
Average Loss	-\$339	Max Loss Streak	8 trades
Profit Factor	1.14		

CALLs vs PUTs

Direction	Trades	P&L	Win Rate
CALLs (Bullish)	336	\$12,534	78.9%
PUTs (Bearish)	29	-\$3,154	62.1%

Performance by Timeframe

Timeframe	Trades	P&L	Win Rate
1D	307	\$10,996	77.2%
1W	47	\$-153	80.9%
1M	11	\$-1,463	72.7%

Performance by Symbol

Symbol	Trades	P&L	Win Rate
SPY	365	\$9,380	77.5%

Performance by Pattern Type

Pattern	Trades	P&L	Win Rate
2-2 Up	218	\$7,384	78.4%
2D-1-2U	28	\$2,995	82.1%
2U-1-2U	40	\$2,337	85.0%
2U-1-2D	32	\$25	71.9%
3-1-2 Up	18	\$-207	77.8%
3-1-2 Down	9	\$-773	44.4%
2D-1-2D	20	\$-2,380	70.0%

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