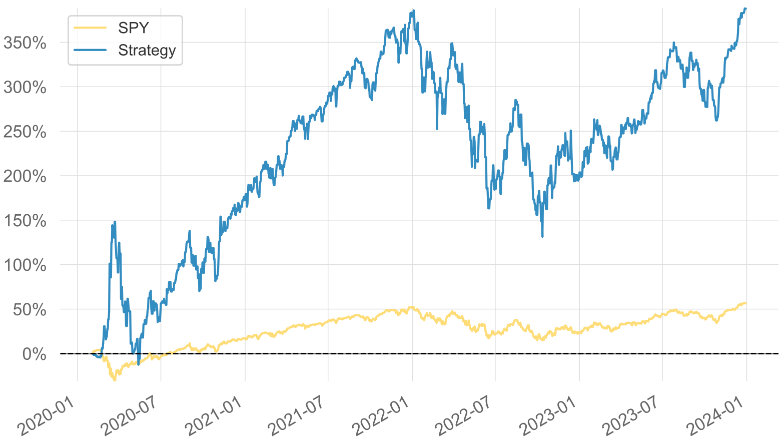
MLTrader Compared to SPY

4 Feb, 2020 - 30 Dec, 2023

Benchmark is SPY | Generated by QuantStats (v. 0.3.1)

Cumulative Returns vs Benchmark



Annual Return ⓘ

50.07%

Total Return ⓘ
388%

Max Drawdown ⓘ
-64.75%

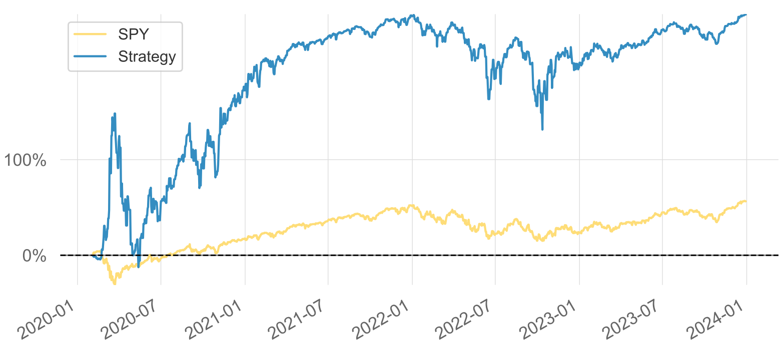
RoMaD ⓘ
0.77

Longest DD Days ⓘ
722

Sharpe ⓘ
0.89

Sortino ⓘ
1.37

Cumulative Returns vs Benchmark (Log Scaled)



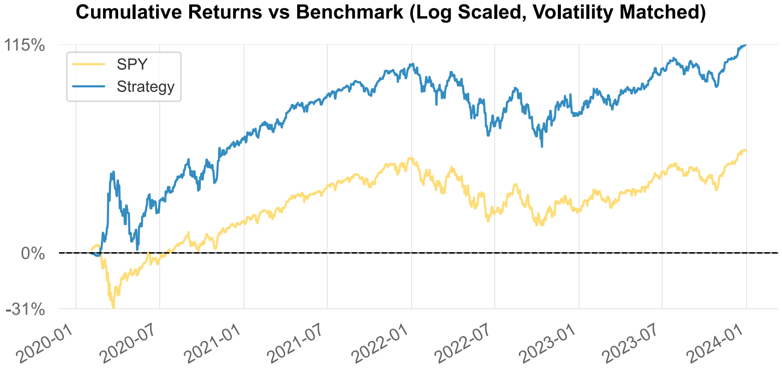
Parameters Used

Parameter	Value
symbol	SPY

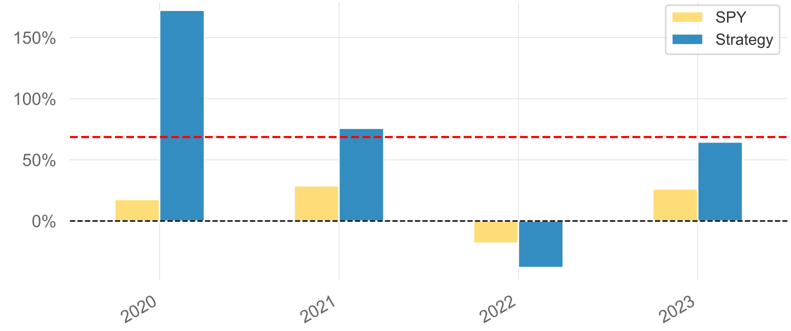
Key Performance Metrics

Metric	SPY	Strategy
Risk-Free Rate	5.21%	5.21%
Time in Market	69.0%	60.0%
Total Return	56%	388%
CAGR% (Annual Return)	12.14%	50.07%
Sharpe	0.39	0.89
RoMaD	0.36	0.77
Corr to Benchmark	1.0	0.14
Prob. Sharpe Ratio	22.94%	48.05%
Smart Sharpe	0.39	0.87
Sortino	0.55	1.37
Smart Sortino	0.54	1.35
Sortino/√2	0.39	0.97
Smart Sortino/√2	0.38	0.95

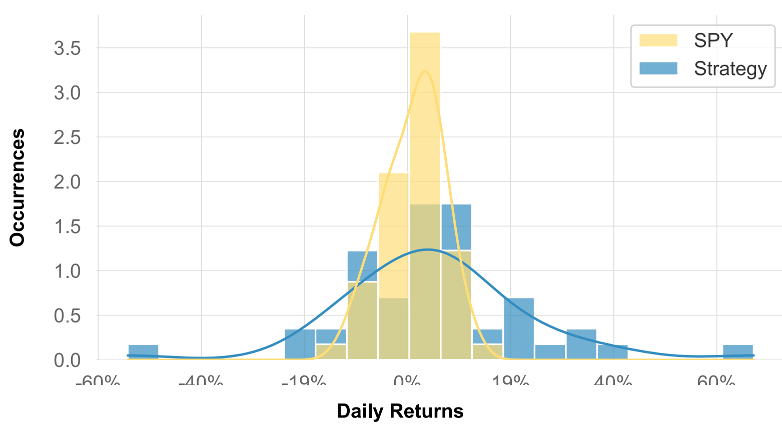
Cumulative Returns vs Benchmark (Log Scaled, Volatility Matched)

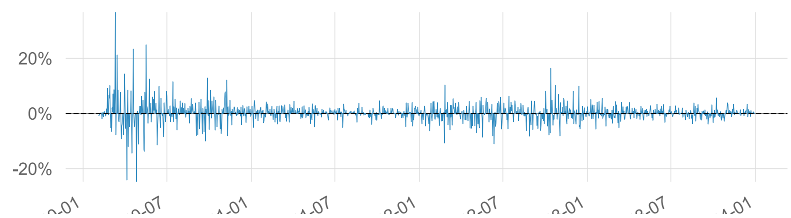


EOY Returns vs Benchmark

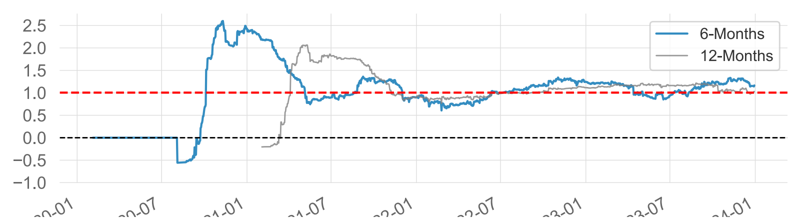


Distribution of Monthly Returns

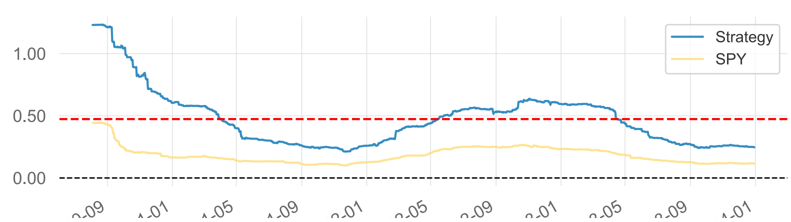




Rolling Beta to Benchmark



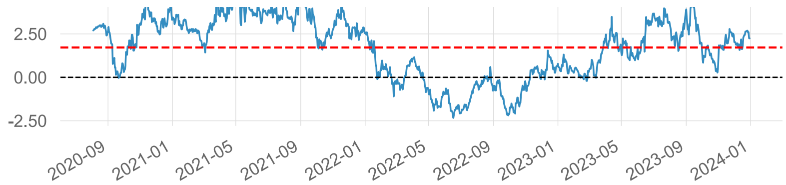
Rolling Volatility (6-Months)



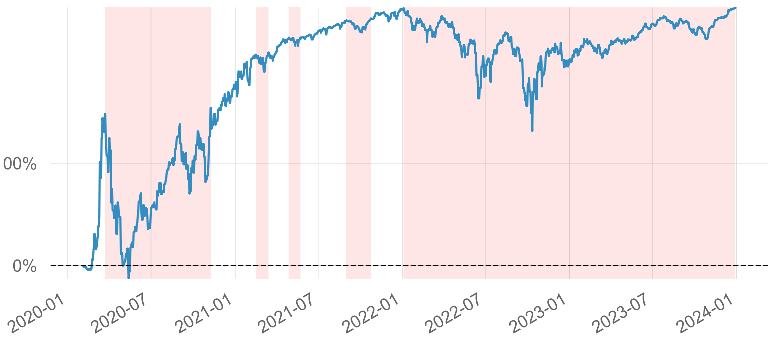
Rolling Sharpe (6-Months)

Rolling Sortino (6-Months)

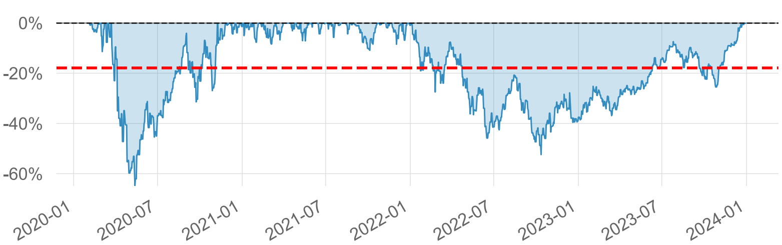
Metric	SPY	Strategy
Omega	1.21	1.21
Max Drawdown	-33.68%	-64.75%
Longest DD Days	708	722
Volatility (ann.)	22.79%	59.99%
R^2	0.02	0.02
Information Ratio	0.04	0.04
Calmar	0.36	0.77
Skew	-0.57	1.26
Kurtosis	16.09	26.22
Expected Daily	0.03%	0.11%
Expected Monthly	0.96%	3.43%
Expected Yearly	11.83%	48.61%
Daily Value-at-Risk	-1.92%	-5.01%
Expected Shortfall (cVaR)	-1.92%	-5.01%
MTD	4.57%	10.13%
3M	11.64%	23.09%
6M	9.33%	17.42%
YTD	26.21%	64.58%
1Y	25.88%	65.68%
3Y (ann.)	10.67%	20.99%
5Y (ann.)	12.14%	50.07%
10Y (ann.)	12.14%	50.07%
All-time (ann.)	12.14%	50.07%
Best Day	9.06%	36.62%
Worst Day	-10.94%	-24.66%
Best Month	12.7%	67.15%
Worst Month	-12.44%	-54.29%
Best Year	28.77%	172.36%
Worst Year	-18.16%	-38.11%
Avg. Drawdown	-2.17%	-6.11%
Avg. Drawdown Days	22	30
Recovery Factor	1.63	3.52
Ulcer Index	0.1	0.23
Serenity Index	0.29	0.7



Strategy - Worst 5 Drawdown Periods



Underwater Plot



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2020	0.00	30.82	67.15	-54.29	41.61	4.18	21.68	26.53	-10.80	-9.10	36.75	8.19
2021	1.39	8.42	8.38	11.60	1.48	4.53	4.61	7.14	-9.81	14.75	0.78	6.66
2022	-14.06	-4.38	10.59	-13.37	-4.37	-20.97	22.38	-9.11	-19.21	21.67	3.36	-7.95
2023	13.54	-2.27	4.42	5.76	1.79	12.37	6.99	-1.37	-9.60	-6.16	19.10	10.13

Strategy - Return Quantiles

Metric	SPY	Strategy
Avg. Up Month	4.56%	12.14%
Avg. Down Month	-4.71%	-9.87%
Win Days	53.77%	55.12%
Win Month	63.83%	65.96%
Win Quarter	68.75%	68.75%
Win Year	75.0%	75.0%
Beta	-	0.36
Alpha	-	0.53
Correlation	-	13.81%
Treynor Ratio	-	1052.93%

EOY Returns vs Benchmark

Year	SPY	Strategy	Multiplier	Won
2020	17.60%	172.36%	9.79	+
2021	28.77%	75.84%	2.64	+
2022	-18.16%	-38.11%	2.10	-
2023	26.21%	64.58%	2.46	+

Worst 10 Drawdowns

Started	Recovered	Drawdown	Days
2020-03-24	2020-11-07	-64.75%	229
2022-01-05	2023-12-27	-52.39%	722
2020-03-01	2020-03-07	-11.40%	7
2021-09-02	2021-10-23	-10.90%	52
2021-11-23	2021-12-15	-8.46%	23
2021-02-17	2021-03-13	-8.37%	25
2020-11-10	2020-11-30	-8.08%	21
2020-03-12	2020-03-14	-7.69%	3
2021-01-27	2021-02-04	-7.65%	9
2021-04-29	2021-05-22	-7.14%	24