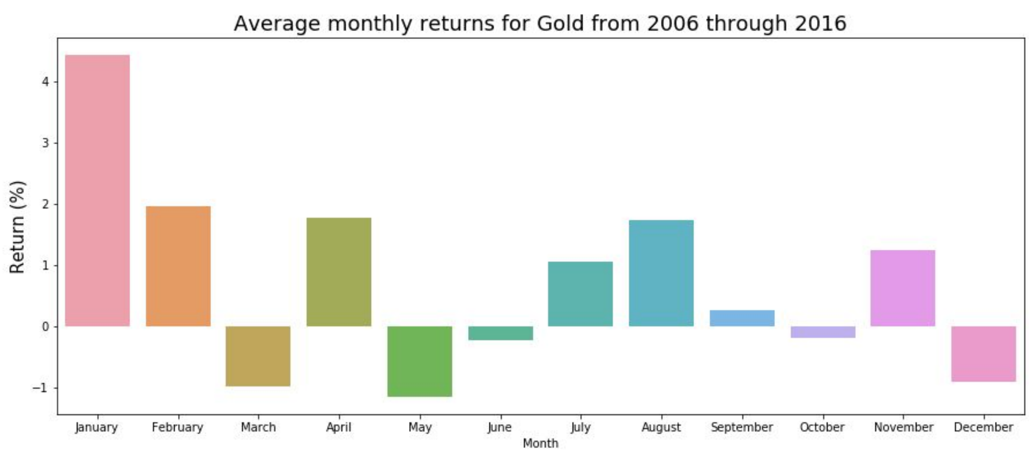
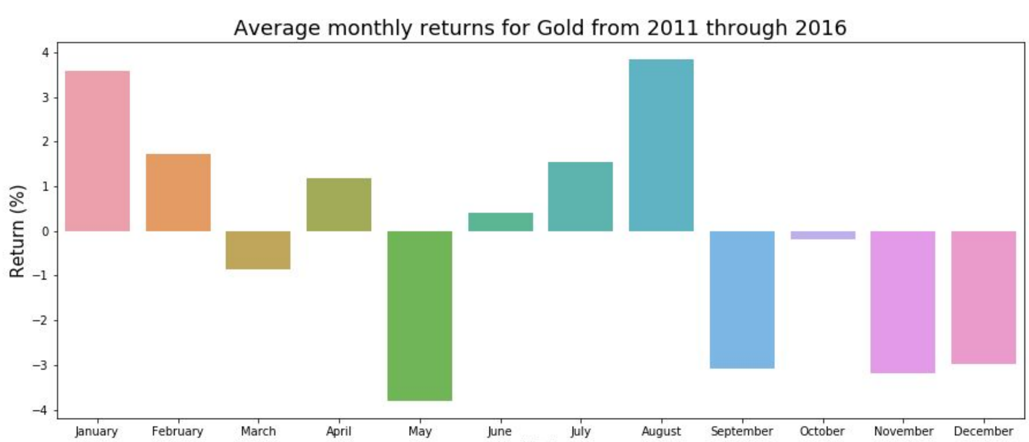
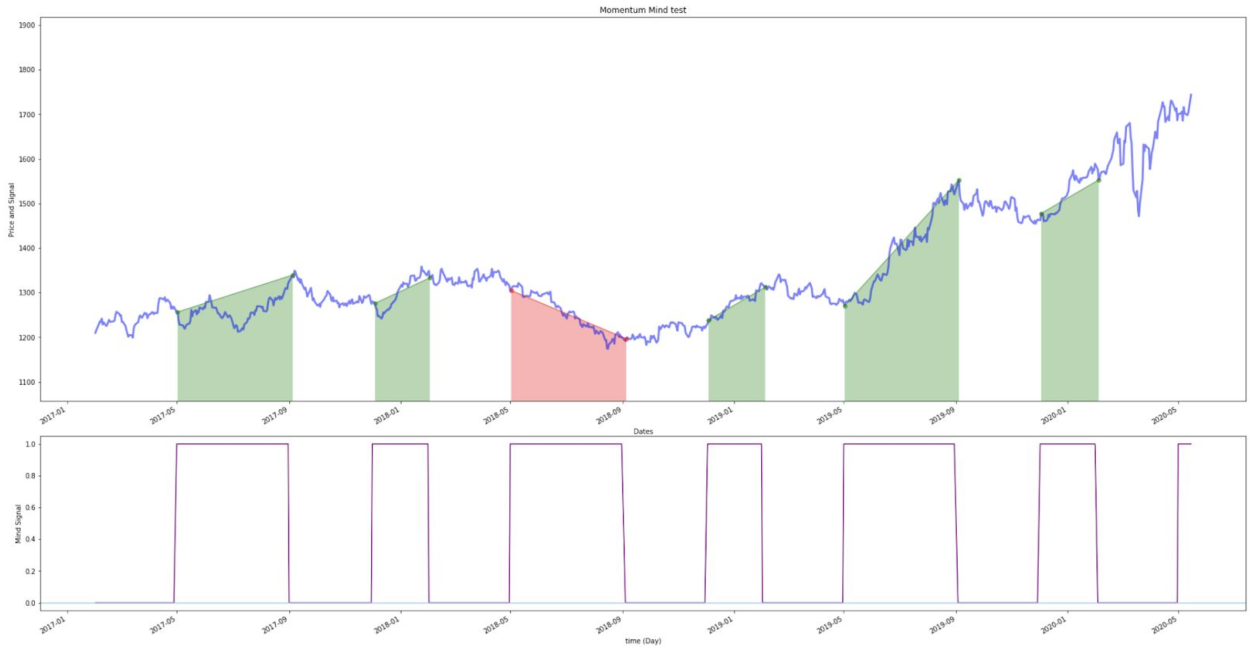
Calendar Effect

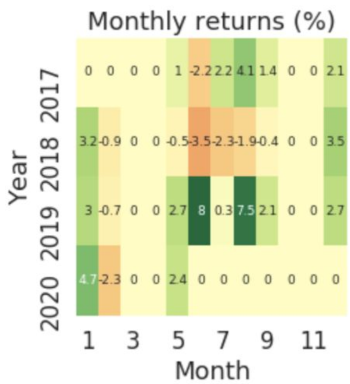
หลักการทดสอบ:

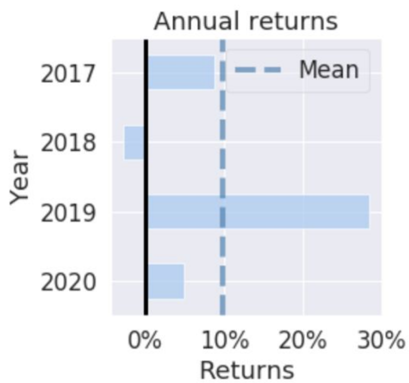
- **เริ่มจากการตรวจสอบผลตอบแทนย้อนหลังของสินทรัพย์ แบ่งออกเป็นแต่ละช่วง**
    - **10 ปี**
    - **5 ปี**
- **กำหนดจุดเข้าซื้อ**
- **ทดสอบย้อนหลังจากช่วงเวลาดังกล่าว (Backtest)**
- **ทดสอบกับช่วงเวลาจริง (FWD Test)**

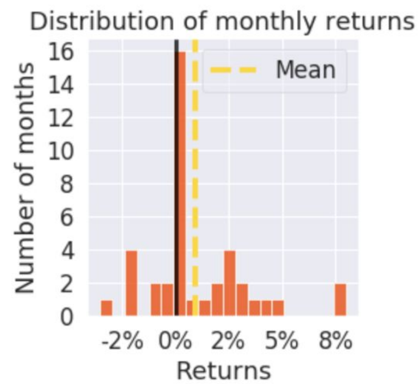


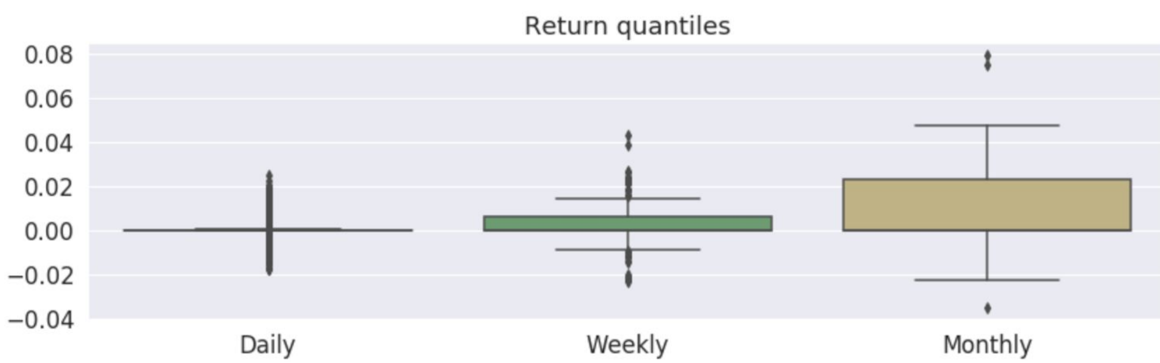


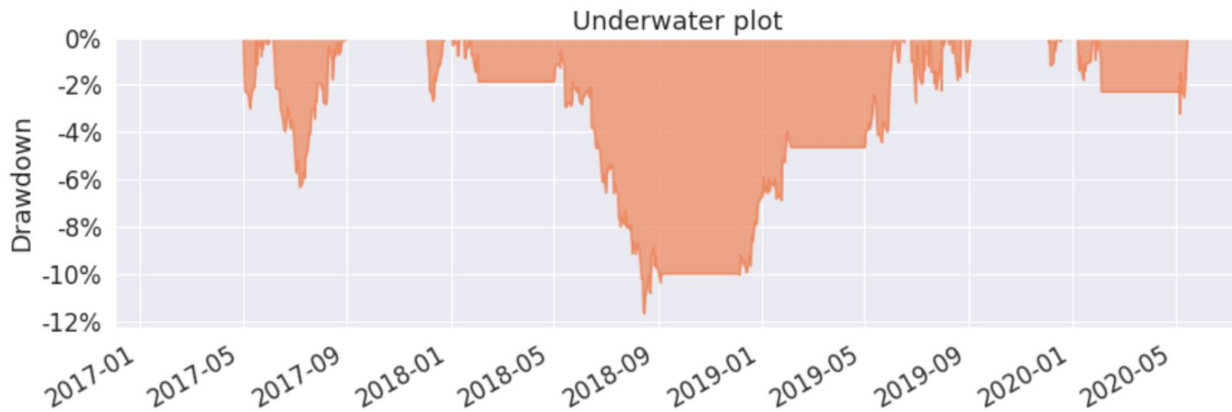

Momentum Mind test
Price and Signal
Dates
Mind Signal
time (Day)


Monthly returns (%)
Year
Month

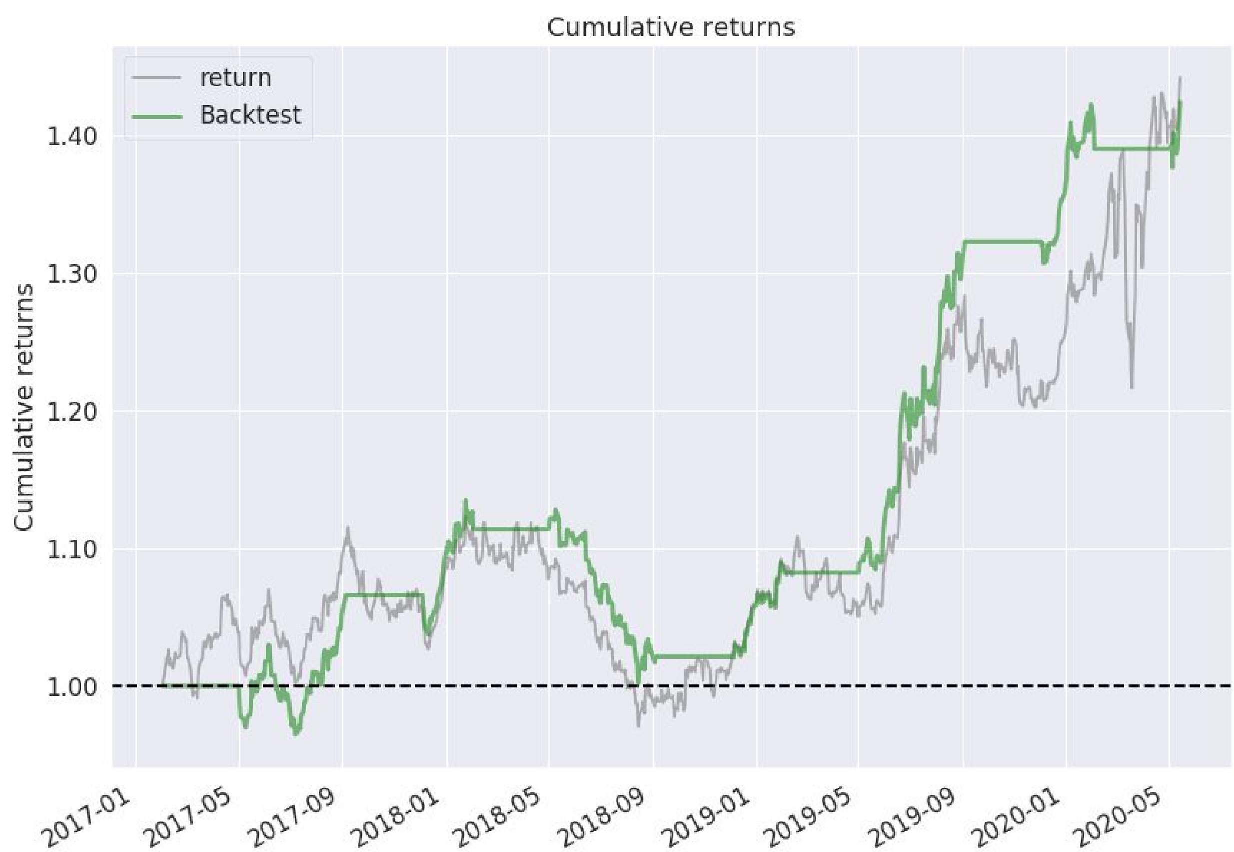

Annual returns
Mean
Year
Returns


Distribution of monthly returns
Mean
Number of months
Returns


Return quantiles
Daily
Weekly
Monthly



Worst drawdown periods	Net drawdown in %	Peak date	Valley date	Recovery date	Duration
0	11.68	2018-01-24	2018-08-16	2019-06-06	357
1	6.33	2017-06-06	2017-07-07	2017-08-28	60
2	3.22	2020-01-31	2020-05-06	2020-05-15	76
3	3.00	2017-05-02	2017-05-10	2017-05-17	12
4	2.76	2019-06-25	2019-07-01	2019-07-17	17

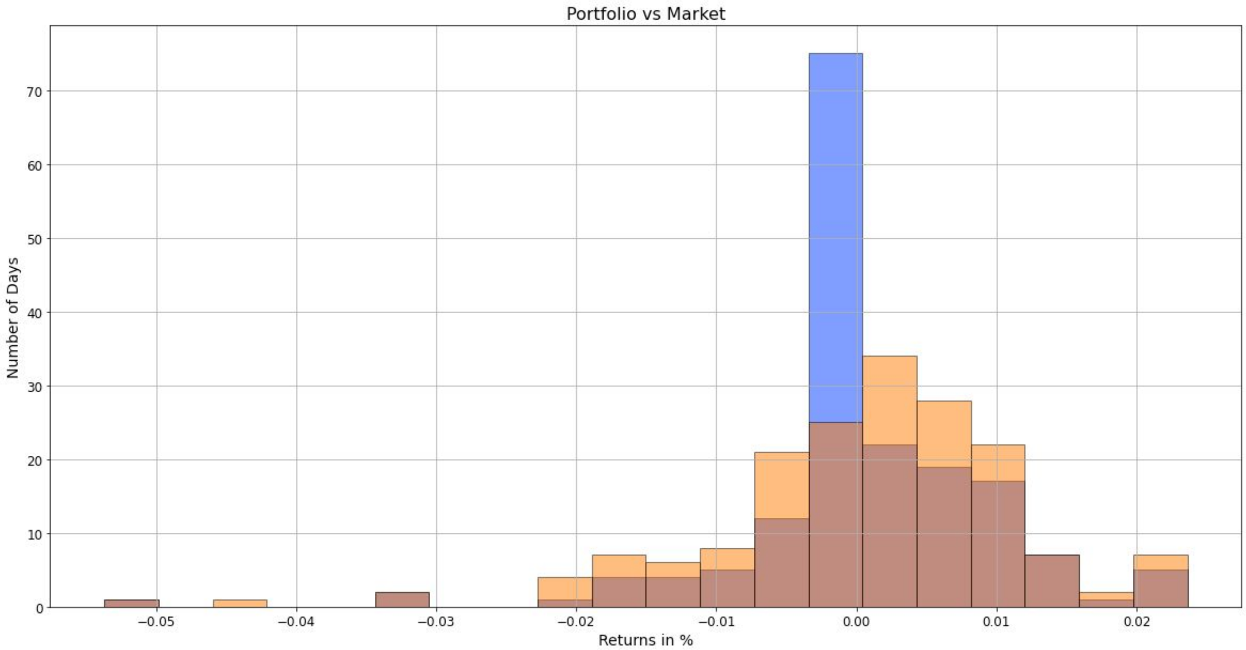


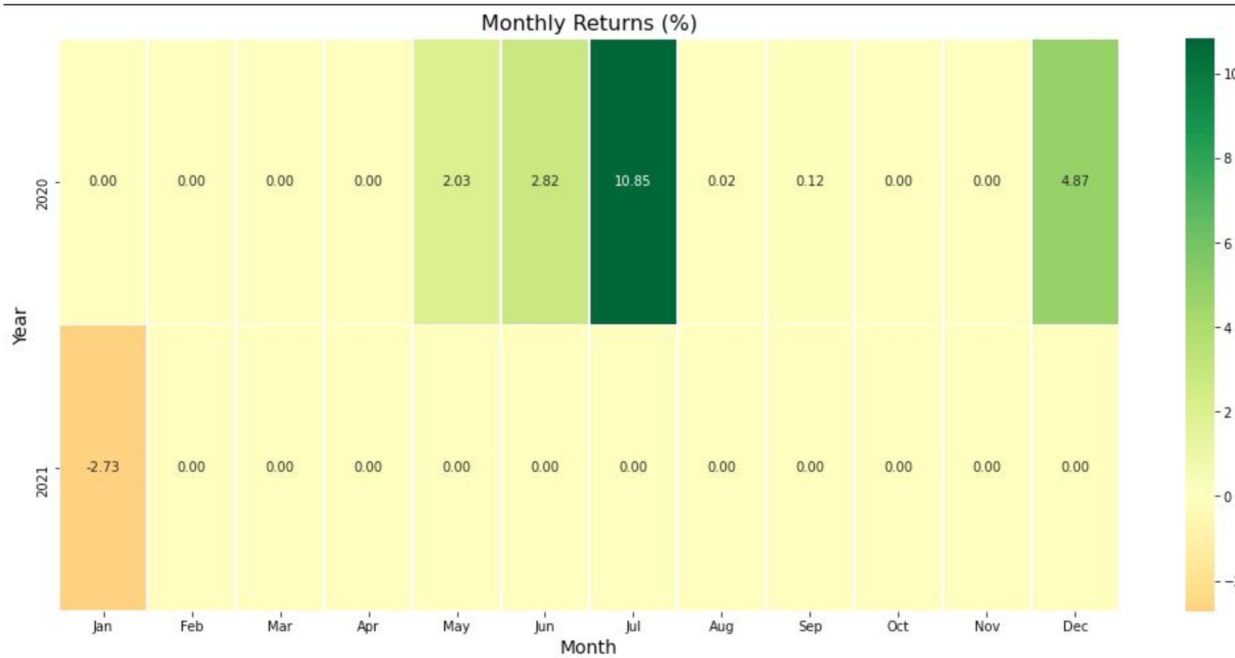
Annual Returns (%)	11.3
Annual Volatility	7.6
Sharp's Ratio	1.46
Sortino's Ratio	2.36
Maximum Drawdown (%)	-11.7

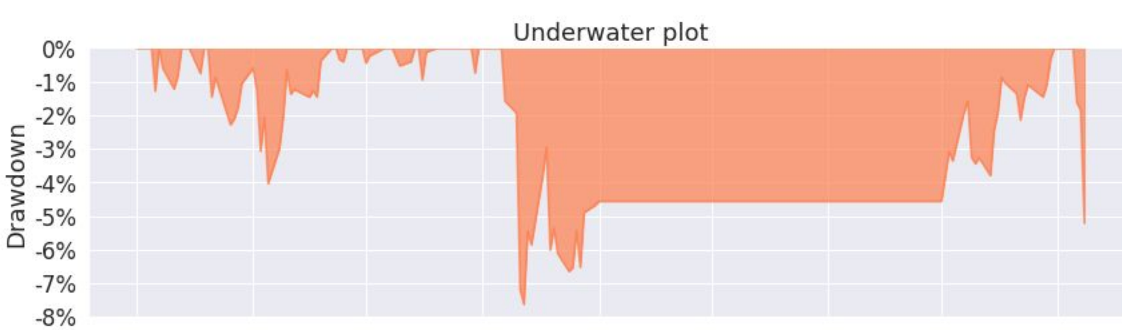
Forward Test:

- **ใช้สัญญาณเป็นช่วงเดือนที่เราได้จากตอนสร้าง signal Backtest**
- **เปรียบเทียบกับ Benchmark (Gold Index Price)**
- **May 2020 – 10 Jan 2021**
- **Risk free rate = 1.5%**

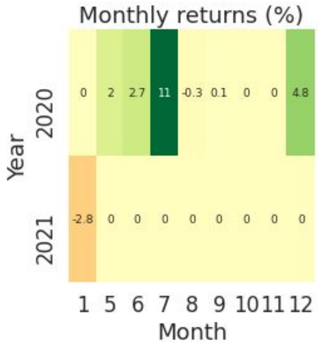
Start date	2020-05-01
End date	2021-01-08
Total months	8
	Backtest
Annual return	26.862%
Cumulative returns	17.966%
Annual volatility	14.443%
Sharpe ratio	1.72
Calmar ratio	3.52
Stability	0.78
Max drawdown	-7.628%
Omega ratio	1.45
Sortino ratio	2.31
Skew	-1.63
Kurtosis	8.64
Tail ratio	1.01
Daily value at risk	-1.721%

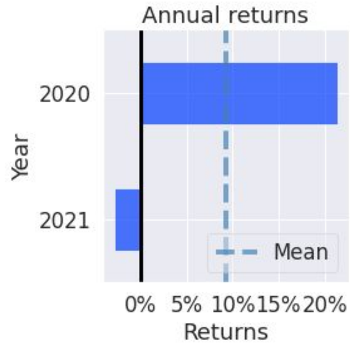

Portfolio vs Market
Number of Days
Returns in %
0
10
20
30
40
50
60
70
−0.05
−0.04
−0.03
−0.02
−0.01
0.00
0.01
0.02

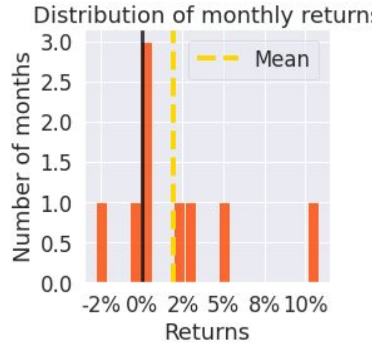

Monthly Returns (%)
Year
Month
2020
0.00
0.00
0.00
0.00
2.03
2.82
10.85
0.02
0.12
0.00
0.00
4.87
2021
-2.73
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
10
8
6
4
2
0
−2

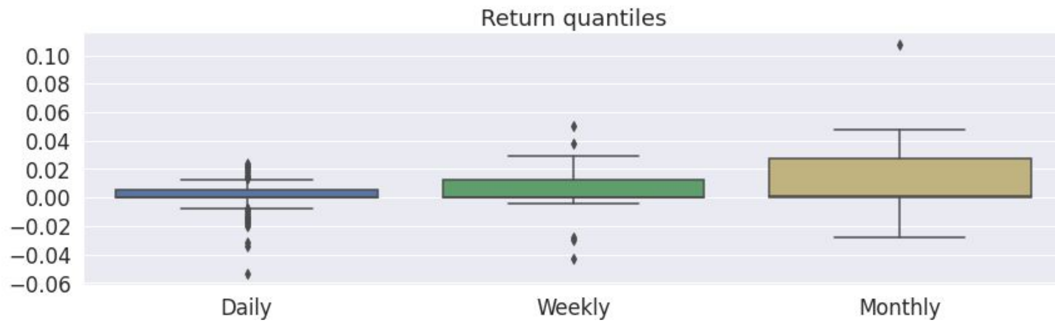

Underwater plot
Drawdown
0%
-1%
-2%
-3%
-4%
-5%
-6%
-7%
-8%

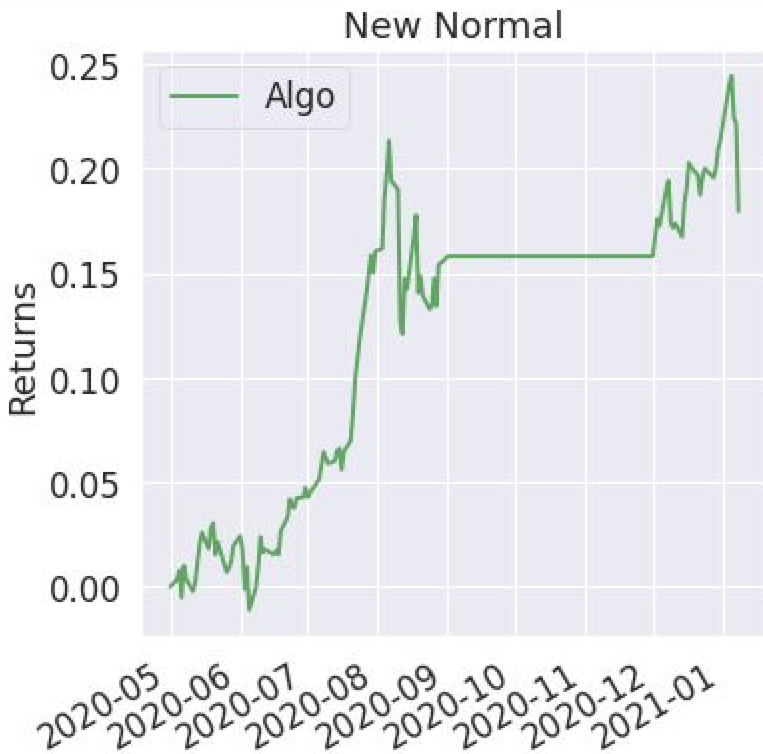
Worst drawdown periods	Net drawdown in %	Peak date	Valley date	Recovery date	Duration
0	7.63	2020-08-06	2020-08-12	2020-12-31	106
1	5.21	2021-01-05	2021-01-08	NaT	NaN
2	4.03	2020-05-20	2020-06-05	2020-06-22	24
3	1.29	2020-05-05	2020-05-06	2020-05-07	3
4	1.22	2020-05-07	2020-05-11	2020-05-13	5


Monthly returns (%)
Year
2020
2021
0 2 2.7 11 -0.3 0.1 0 0 4.8
-2.8 0 0 0 0 0 0 0 0
1 5 6 7 8 9 10 11 12
Month


Annual returns
Year
2020
2021
Mean
0% 5% 10% 15% 20%
Returns


Distribution of monthly returns
Number of months
3.0 2.5 2.0 1.5 1.0 0.5 0.0
Mean
-2% 0% 2% 5% 8% 10%
Returns


Return quantiles
0.10 0.08 0.06 0.04 0.02 0.00 −0.02 −0.04 −0.06
Daily
Weekly
Monthly


New Normal
Algo
Returns
0.25 0.20 0.15 0.10 0.05 0.00
2020-05 2020-06 2020-07 2020-08 2020-09 2020-10 2020-11 2020-12 2021-01