NFU Progress Report

2023/06/10

NFUIM

Outline

- Current progress (Finished)
- Method
- Results
- Explanation

Current progress (Finished)

1. Check if the US stock market is open (considering EST and EDT).
2. Calculate the threshold of volume.
3. Identify the days that meet the criteria for trading.
4. Calculate the profit ratio.

Method

Our Parameter:

n_day = 90

n_percentile = 0.95

n_time = 0h 0m 0s

n% = 5

1. Preprocess the data using the information provided by CCU.
2. Address the issue of time zones.
3. Calculate the threshold of volume using n_day (90) as a parameter. Determine which days meet the condition of n_percentile (95).
4. Within n_time (From market open to market close) after the market opens, evaluate the condition:

You can configure this parameter (ex: 15 min), but it is not currently set.

Formula = "[now_price > open_price * (1 + n%)] or [now_ price < open_price * (1 - n%)]"

If the condition is met, initiate a reverse operation and conclude the trade at the market close (day trading).

Results

Data

Directory description:

all = Data merging and processing

bk = Backup records from the past (not important)

log = Trading logs, recording the dates of each stock transaction (.txt)

trading = Records of all stock transactions (.csv)

trading-strategy = Records of stocks with trading activity (.csv)

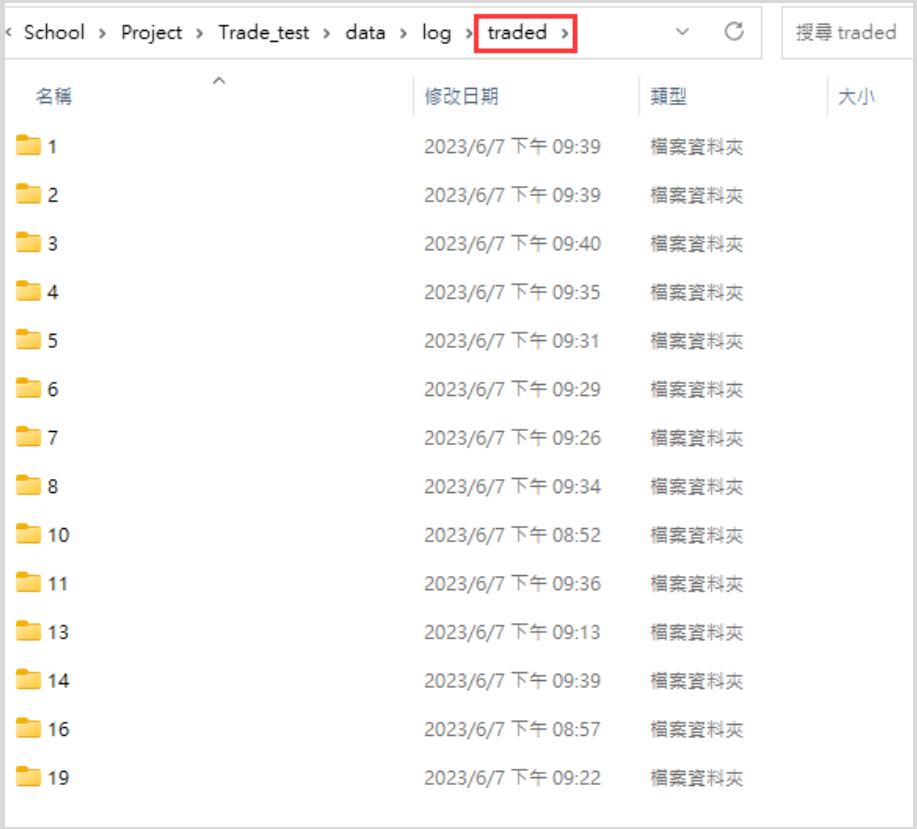
Explanation - log

In the "log" folder, you can find two directories named "no_traded" and "traded"[1]. The "no_traded" directory contains stocks that were not traded, while the "traded" directory contains stocks that were traded.

Inside the "traded" folder, the stocks are organized based on the number of trades[2]. For example, if a stock has a total of 8 trades, it will be stored in the "8" directory[3].

[1]

[2]

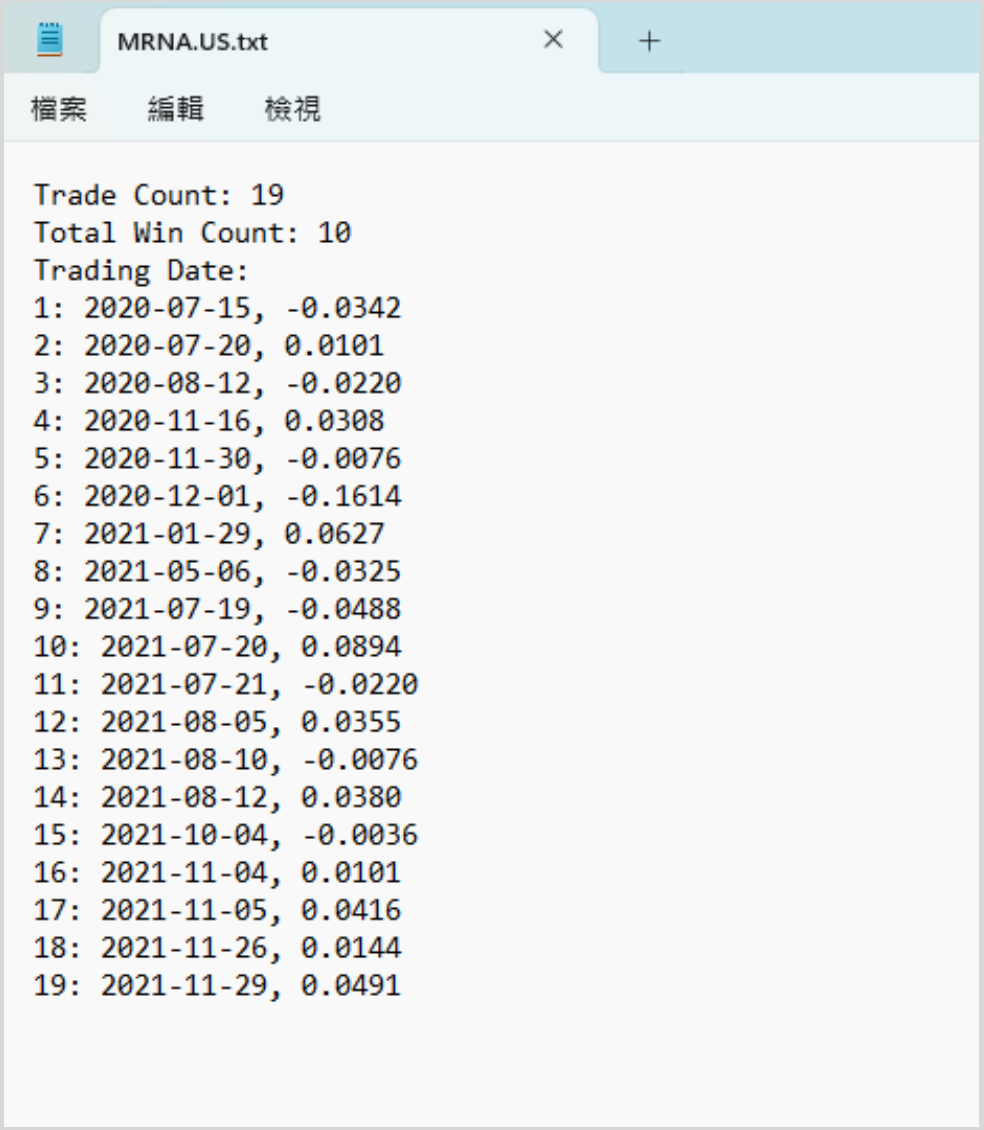


[3]

Explanation - log

When you open the document, it will appear as shown in the image on the right.

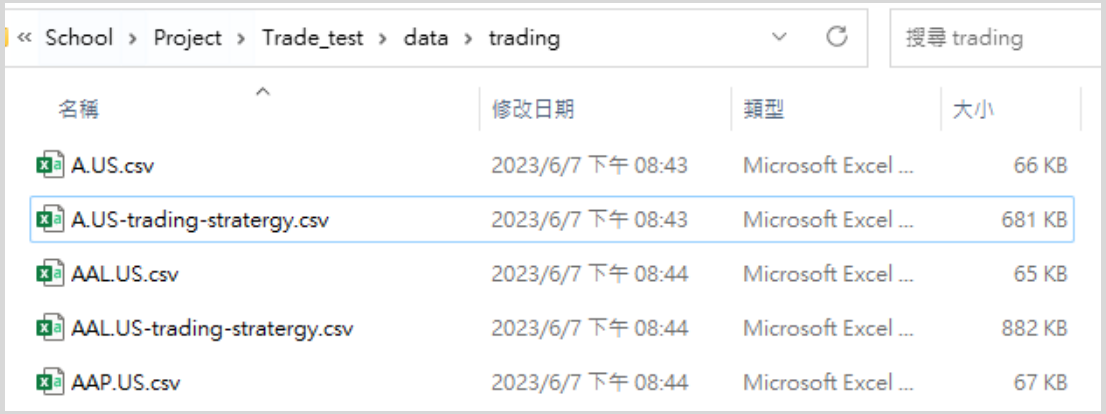
The document will display the number of trades, the number of profitable trades, the trading dates, and the returns.



Explanation - trading

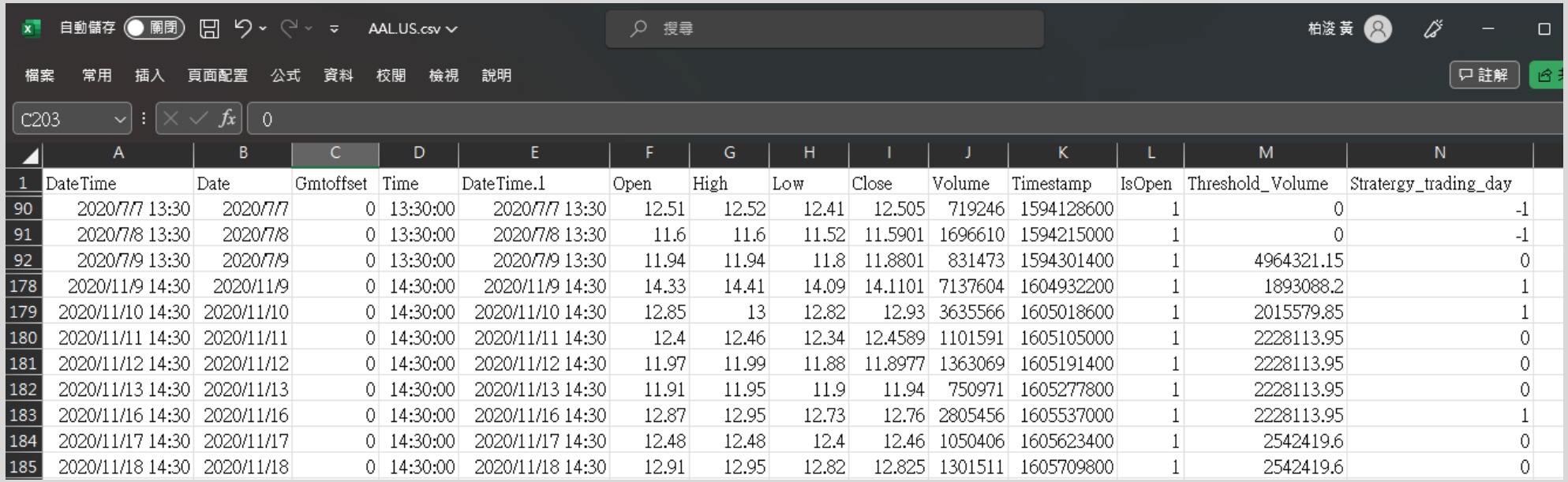
The "trading" folder contains the calculation process for all stocks[1]. If the file name is "stock name" (ex: AAL.US.csv), it represents the calculation for the first condition[2]. If the file name is “stock name-trading-strategy” (ex: AAL.US-trading-strategy.csv), it represents the simulation process for trading[3].

[1]



Explanation - trading

[2]

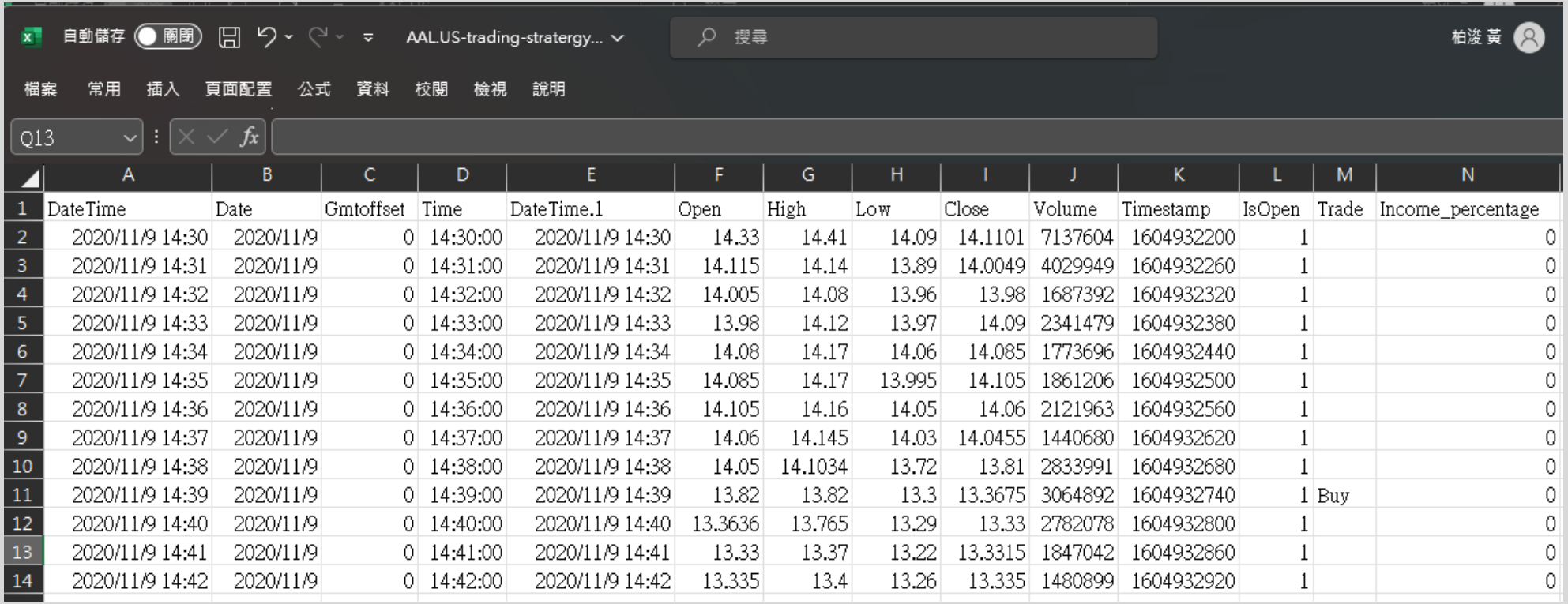


	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DateTime	Date	Gmtoffset	Time	DateTime.1	Open	High	Low	Close	Volume	Timestamp	IsOpen	Threshold_Volume	Stratergy_trading_day
90	2020/7/7 13:30	2020/7/7	0	13:30:00	2020/7/7 13:30	12.51	12.52	12.41	12.505	719246	1594128600	1	0	-1
91	2020/7/8 13:30	2020/7/8	0	13:30:00	2020/7/8 13:30	11.6	11.6	11.52	11.5901	1696610	1594215000	1	0	-1
92	2020/7/9 13:30	2020/7/9	0	13:30:00	2020/7/9 13:30	11.94	11.94	11.8	11.8801	831473	1594301400	1	4964321.15	0
178	2020/11/9 14:30	2020/11/9	0	14:30:00	2020/11/9 14:30	14.33	14.41	14.09	14.1101	7137604	1604932200	1	1893088.2	1
179	2020/11/10 14:30	2020/11/10	0	14:30:00	2020/11/10 14:30	12.85	13	12.82	12.93	3635566	1605018600	1	2015579.85	1
180	2020/11/11 14:30	2020/11/11	0	14:30:00	2020/11/11 14:30	12.4	12.46	12.34	12.4589	1101591	1605105000	1	2228113.95	0
181	2020/11/12 14:30	2020/11/12	0	14:30:00	2020/11/12 14:30	11.97	11.99	11.88	11.8977	1363069	1605191400	1	2228113.95	0
182	2020/11/13 14:30	2020/11/13	0	14:30:00	2020/11/13 14:30	11.91	11.95	11.9	11.94	750971	1605277800	1	2228113.95	0
183	2020/11/16 14:30	2020/11/16	0	14:30:00	2020/11/16 14:30	12.87	12.95	12.73	12.76	2805456	1605537000	1	2228113.95	1
184	2020/11/17 14:30	2020/11/17	0	14:30:00	2020/11/17 14:30	12.48	12.48	12.4	12.46	1050406	1605623400	1	2542419.6	0
185	2020/11/18 14:30	2020/11/18	0	14:30:00	2020/11/18 14:30	12.91	12.95	12.82	12.825	1301511	1605709800	1	2542419.6	0

Condition Calculation Process

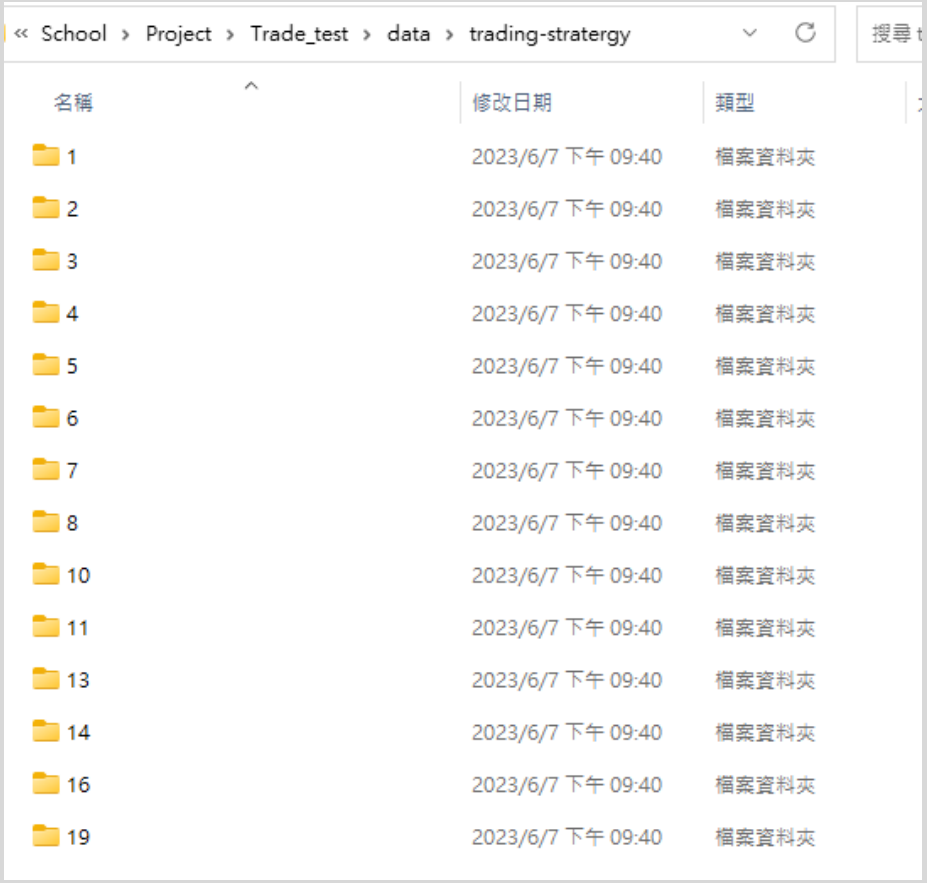
Explanation - trading

[3]



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DateTime	Date	Gmtoffset	Time	DateTime.1	Open	High	Low	Close	Volume	Timestamp	IsOpen	Trade	Income_percentage
2	2020/11/9 14:30	2020/11/9	0	14:30:00	2020/11/9 14:30	14.33	14.41	14.09	14.1101	7137604	1604932200	1		0
3	2020/11/9 14:31	2020/11/9	0	14:31:00	2020/11/9 14:31	14.115	14.14	13.89	14.0049	4029949	1604932260	1		0
4	2020/11/9 14:32	2020/11/9	0	14:32:00	2020/11/9 14:32	14.005	14.08	13.96	13.98	1687392	1604932320	1		0
5	2020/11/9 14:33	2020/11/9	0	14:33:00	2020/11/9 14:33	13.98	14.12	13.97	14.09	2341479	1604932380	1		0
6	2020/11/9 14:34	2020/11/9	0	14:34:00	2020/11/9 14:34	14.08	14.17	14.06	14.085	1773696	1604932440	1		0
7	2020/11/9 14:35	2020/11/9	0	14:35:00	2020/11/9 14:35	14.085	14.17	13.995	14.105	1861206	1604932500	1		0
8	2020/11/9 14:36	2020/11/9	0	14:36:00	2020/11/9 14:36	14.105	14.16	14.05	14.06	2121963	1604932560	1		0
9	2020/11/9 14:37	2020/11/9	0	14:37:00	2020/11/9 14:37	14.06	14.145	14.03	14.0455	1440680	1604932620	1		0
10	2020/11/9 14:38	2020/11/9	0	14:38:00	2020/11/9 14:38	14.05	14.1034	13.72	13.81	2833991	1604932680	1		0
11	2020/11/9 14:39	2020/11/9	0	14:39:00	2020/11/9 14:39	13.82	13.82	13.3	13.3675	3064892	1604932740	1	Buy	0
12	2020/11/9 14:40	2020/11/9	0	14:40:00	2020/11/9 14:40	13.3636	13.765	13.29	13.33	2782078	1604932800	1		0
13	2020/11/9 14:41	2020/11/9	0	14:41:00	2020/11/9 14:41	13.33	13.37	13.22	13.3315	1847042	1604932860	1		0
14	2020/11/9 14:42	2020/11/9	0	14:42:00	2020/11/9 14:42	13.335	13.4	13.26	13.335	1480899	1604932920	1		0

Trading Record

Explanation - trading-strategy

The "trading-strategy" folder stores all the stocks that have been traded and records the trading process. Similar to the "log/traded" folder, it is categorized based on the number of trades.