C O N V I C T I O N B U Y

S T O C K

B A C K T E S T

and

A N A L Y S I S

S Y S T E M

1   Quick Start

1.1   Requirement

- Install numpy, pandas, matplotlib yourself, or

- Install an integrated development environment such as canopy

```
$CBROOT = /path/to/convictionbuy/
```

1.2   Prepare portfolio file

- `cd $CBROOT/data`
- `Create new file portfolio2015.txt`
- `Input equity symbol. E.g.`

```
NYSE:DOW  NYSE:PEP  NYSE:CVX  NYSE:WMT  NYSE:MMM  NYSE:CAT  NYSE:XOM  NYSE:COP  NYSE:KO
NYSE:CL  NYSE:KMB  NYSE:MCD  NYSE:GE  NYSE:BA  NYSE:NOC  NYSE:MRK  NYSE:GSK  NYSE:NVS  NYSE:PG
NYSE:JNJ  NYSE:MJN  NYSE:ABT  NYSE:LLY  NYSE:PFE  NYSE:BMY  NYSE:SNY  NASDAQ:BIIB  NYSE:AZN
NASDAQ:GILD  NYSE:BLK  NYSE:AXP  NYSE:MA  NYSE:V  NYSE:C  NYSE:BAC  NYSE:JPM  NYSE:WFC  NYSE:GM
NYSE:F  NYSE:MS  NASDAQ:ERIC  NYSE:NOK  NASDAQ:NTES  NASDAQ:BBRY  NYSE:QIHU  NASDAQ:SOHU
NASDAQ:CYOU  NYSE:VIPS  NYSE:LITB  NYSE:BABA  NASDAQ:WB  NASDAQ:YY  NYSE:VMW  NASDAQ:NFLX
NASDAQ:AMZN  NASDAQ:GOOGL  NASDAQ:GOOG  NYSE:LMT  NYSE:A  NYSE:GS  NASDAQ:BIDU  NYSE:ORCL
NASDAQ:FB  NYSE:TWTR  NYSE:EMC  NASDAQ:AAPL  NASDAQ:JDSU  NASDAQ:CSCO  NYSE:T  NYSE:VZ
NASDAQ:MSFT  NYSE:SAP  NASDAQ:INTC  NYSE:IBM  NASDAQ:QCOM  NASDAQ:TSLA  NYSE:COH  NYSE:RTN
NYSE:CBI  NYSE:HD  NYSE:DIS  NASDAQ:FOXA
```

- `Save and close file`

1.3   Run optimization on strategy "st_aeoas"

- `cd $CBROOT/src`
- `run backtest.py -f ..\data\portfolio2015.txt -p 'chart=0&mode=1' -g st_aeoas -s 2013-12-20 -e 2015-01-13`
- `a file "st_aeoas_best_2015-01-14.csv" will be created in $CBROOT/result:`

	symbol	param	alpha	beta	perf	max_drawdow	profit_ord	loss_orde	last_trade	bh_profit	mark
44	YY	t=8&h=15	0.564	-0.011	7927.184	0.238	3	1	2015-01-09 buy 0 68.84	3486.51	px=67.50,avgTyp=67.12,avgHac=66.60
50	YY	t=9&h=15	0.564	-0.011	7927.184	0.238	3	1	2015-01-09 buy 0 68.84	3486.51	px=67.50,avgTyp=67.01,avgHac=66.60
43	YY	t=8&h=14	0.57	-0.028	7849.194	0.205	3	1	2015-01-07 buy 0 67.93	3486.51	px=67.50,avgTyp=67.12,avgHac=66.60
28	VIPS	t=6&h=14	0.606	0.001	7464.544	0.408	3	3	2015-01-06 buy 0 21.75	15211.27	px=21.48,avgTyp=21.84,avgHac=21.24
43	VIPS	t=8&h=14	0.574	-0.003	7317.029	0.408	3	2	2015-01-07 buy 0 22.28	15211.27	px=21.48,avgTyp=21.69,avgHac=21.24
37	VIPS	t=7&h=15	0.574	-0.003	7317.029	0.408	3	2	2015-01-07 buy 0 22.28	15211.27	px=21.48,avgTyp=21.76,avgHac=21.21
50	TSLA	t=9&h=15	0.449	0.05	5062.019	0.282	3	2	2014-12-02 sell -1019.42 232.22	4228.49	px=204.25,avgTyp=209.84,avgHac=213.70
43	TSLA	t=8&h=14	0.418	0.059	4592.347	0.264	3	3	2015-01-06 sell -1198.39 209.94	4228.49	px=204.25,avgTyp=209.21,avgHac=213.32
37	TSLA	t=7&h=15	0.418	0.059	4592.347	0.264	3	3	2015-01-06 sell -1198.39 209.94	4228.49	px=204.25,avgTyp=208.51,avgHac=213.70
1	INTC	t=4&h=6	0.301	0.161	4078.035	0.06	6	5	2015-01-02 sell -121.92 36.58	4807.3	px=36.50,avgTyp=36.62,avgHac=36.56
11	INTC	t=5&h=6	0.297	0.155	4013.227	0.064	5	6	2015-01-02 sell -121.6 36.58	4807.3	px=36.50,avgTyp=36.58,avgHac=36.56
2	INTC	t=4&h=7	0.261	0.149	3473.602	0.073	5	5	2015-01-02 sell -398.97 36.58	4807.3	px=36.50,avgTyp=36.62,avgHac=36.55
33	NFLX	t=7&h=11	0.304	0.086	3133.219	0.145	3	2	2015-01-07 sell -601.99 328.62	-1442.96	px=323.79,avgTyp=328.99,avgHac=332.57
48	NFLX	t=9&h=13	0.292	0.091	2980.254	0.133	3	3	2015-01-06 sell -467.24 327.51	-1442.96	px=323.79,avgTyp=330.24,avgHac=333.41
36	NFLX	t=7&h=14	0.292	0.091	2980.254	0.133	3	3	2015-01-06 sell -467.24 327.51	-1442.96	px=323.79,avgTyp=328.99,avgHac=333.82
50	FB	t=9&h=15	0.309	-0.11	2896.347	0.149	2	2	2015-01-07 sell -270.31 76.52	3233.51	px=76.45,avgTyp=77.53,avgHac=77.86
44	FB	t=8&h=15	0.309	-0.11	2896.347	0.149	2	2	2015-01-07 sell -270.31 76.52	3233.51	px=76.45,avgTyp=77.45,avgHac=77.86
30	AZN	t=7&h=8	0.255	0.059	2878.432	0.132	4	2	2014-12-03 sell 606.45 73.56	2444.6	px=70.76,avgTyp=70.04,avgHac=69.97
38	AZN	t=8&h=9	0.245	0.055	2730.069	0.132	4	2	2014-12-03 sell 599.52 73.56	2444.6	px=70.76,avgTyp=70.03,avgHac=70.00
31	AZN	t=7&h=9	0.245	0.055	2730.069	0.132	4	2	2014-12-03 sell 599.52 73.56	2444.6	px=70.76,avgTyp=70.04,avgHac=70.00
1	BBRY	t=4&h=6	0.315	-0.053	2666.307	0.327	4	6	2015-01-07 sell -196.64 10.65	2998.66	px=9.71,avgTyp=10.20,avgHac=10.44
11	BBRY	t=5&h=6	0.315	-0.053	2666.307	0.327	4	6	2015-01-07 sell -196.64 10.65	2998.66	px=9.71,avgTyp=10.27,avgHac=10.44
1	LLY	t=4&h=6	0.194	0.268	2647.627	0.078	7	5	2015-01-12 sell -47.49 69.88	4127.47	px=69.38,avgTyp=69.78,avgHac=69.91
2	LLY	t=4&h=7	0.193	0.269	2633.261	0.079	7	5	2015-01-12 sell -47.49 69.88	4127.47	px=69.38,avgTyp=69.78,avgHac=69.93
47	LLY	t=9&h=12	0.203	0.174	2623.128	0.089	4	2	2014-12-31 sell 957.83 69.59	4127.47	px=69.38,avgTyp=69.90,avgHac=70.03
8	BBRY	t=4&h=13	0.296	-0.033	2607.126	0.296	3	5	2015-01-12 sell -737.62 10.22	2998.66	px=9.71,avgTyp=10.20,avgHac=10.51
36	FB	t=7&h=14	0.252	-0.091	2182.036	0.147	3	3	2015-01-07 sell -255.83 76.52	3233.51	px=76.45,avgTyp=77.37,avgHac=77.86
21	CSCO	t=6&h=7	0.112	0.168	1960.322	0.091	7	5	2015-01-13 buy 0 28.23	3535.65	px=28.10,avgTyp=27.87,avgHac=27.79
44	V	t=8&h=15	0.133	0.263	1937.913	0.082	2	4	2015-01-13 sell -70.72 261.93	2012.53	px=260.78,avgTyp=261.76,avgHac=261.96

NOTED:

- bh_profit = buy & hold profit (from first trade)
- param = strategy parameter
- mark = additional strategy info, e.g px=67.50(last close price=67.5); avgTyp and avgHac is strategy indicator

1.4   About strategy

The strategy is implemented according to the article "An Expert Of A System" by Sylvain Vervoort, technical analysis of stock & commodities 2013 Oct issue.

please refer to http://www.traders.com/Documentation/FEEDbk_docs/2013/10/Vervoort.html