

SmartBetas - Getting Started

Note: You need to use *python3.7*

Clone or download the repository on your computer:

```
git clone https://github.com/epfeff/smartbetas.git
```

Make sure that the required libraries are installed on your computer:

```
pip3 install pydal
```

Important Please use your own Alphavantage API key, you can claim yours are the following address: <https://www.alphavantage.co/support/#api-key>.

Set up your key in `gb1.py` :

```
cd smartbetas/smartbetas
nano gb1.py

...
API_KEY='YOURAPIKEY'                # public API key
...
```

Navigate to the root of the package and create a file containing stock tickers:

```
cd smartbetas
nano tickers.txt
....
```

Start the program and load the stock tickers file:

```
python smartbetas
....
Smart Betas Investing - Requires an internet connection
(beta):
....
(beta): load tickers.txt
--> found tickers.txt!
--> found 2 tickers
--> 0: AAPL
--> 1: TSLA
--> save tickers ? (y/n): y
```

You can confirm that the tickers were properly saved with `show tickers` :

```
(beta): show tickers
--> 2 ticker(s) ready
--> 0: AAPL - Apple Inc.
--> 1: TSLA - Tesla Inc.
```

Note that it is also possible to verify what tickers are saved in the database with `symbols` :

```
(beta): symbols
--> 0: AAPL - Apple Inc.
--> 1: TSLA - Tesla Inc.
--> 2: GOOGL - Alphabet Inc.
--> 3: BABA - Alibaba Group Holding Limited
```

You can then ask the program to generate a portfolio collection with `compute` :

```
(beta): compute
(-api): fetching data for AAPL
(-api): fetching data for TSLA
(-api): data fetched for TSLA!
(-api): data fetched for AAPL!
```

Pos	Volatility		Momentum		Composite	
1	AAPL	21.9	AAPL	1.82 %	AAPL	189.0 \$
2	TSLA	33.12	TSLA	-7.02 %	TSLA	211.03 \$

```
--> save portfolio (y/n): y
--> portfolio name: MyPortfolio
--> portfolio MyPortfolio saved
```

The last generated portfolio collection is saved in the persistence layer, you can verify what is stored with `show portfolio` :

```
(beta): show portfolio
--> current portfolio
```

Pos	Volatility		Momentum		Composite	
1	AAPL	21.9	AAPL	1.82 %	AAPL	189.0 \$
2	TSLA	33.12	TSLA	-7.02 %	TSLA	211.03 \$

Investing 100'000 USD in each portfolio is done with `invest` :

```
(beta): invest
Invest 100'000 USD in each portefolio (y/n): y
Invest in the [x] top securities (2): 2
Name of the investment : MyInvestment
```

You can list all the investment made wiht `show invest` :

(beta): show invest

Pos	Id	Date	Name
1	1	2019-04-22 16:57:42	MyInvestment1
2	2	2019-04-27 13:59:42	MyInvestment2
3	3	2019-04-27 14:05:07	MyInvestment3
4	4	2019-04-28 12:31:58	MyInvestment4
5	5	2019-04-28 12:32:38	MyInvestment5
6	6	2019-05-19 16:41:09	MyInvestment6

To measure the returns of an investment, simple type in check :

(beta): check

Pos	Id	Date	Name
1	1	2019-04-22 16:57:42	MyInvestment1
2	2	2019-04-27 13:59:42	MyInvestment2
3	3	2019-04-27 14:05:07	MyInvestment3
4	4	2019-04-28 12:31:58	MyInvestment4
5	5	2019-04-28 12:32:38	MyInvestment5
6	6	2019-05-19 16:41:09	MyInvestment6

--> Session ID ? (Id): 1

(-api): working....

MyInvestment1 - Report

Volatility Based Portfolio

Ticker	N Shares	Purchase Date	Initial	Current	Abs Change	Returns
MBRX	11261	2019-04-22	1.48 \$	1.16 \$	-3603.52 \$	-21.62 %
RAD	1718	2019-04-22	9.7006 \$	9.13 \$	-980.29 \$	-5.88 %
KEYW	1487	2019-04-22	11.21 \$	11.22 \$	14.87 \$	0.09 %
ACB	1832	2019-04-22	9.1 \$	8.68 \$	-769.44 \$	-4.62 %
STLD	500	2019-04-22	33.335 \$	30.02 \$	-1657.5 \$	-9.94 %
AMD	597	2019-04-22	27.9316 \$	27.5 \$	-257.67 \$	-1.55 %
Total	NA	2019-04-22	100015.0 \$	92761.5 \$	-7253.5 \$	-7.25 %

Momentum Based Portfolio

Ticker	N Shares	Purchase Date	Initial	Current	Abs Change	Returns
AMD	597	2019-04-22	27.9316 \$	27.5 \$	-257.67 \$	-1.55 %
ACB	1832	2019-04-22	9.1 \$	8.68 \$	-769.44 \$	-4.62 %
GWV	56	2019-04-22	298.71 \$	267.1 \$	-1770.16 \$	-10.58 %
GOOGL	13	2019-04-22	1241.93 \$	1168.78 \$	-950.95 \$	-5.89 %
AAPL	82	2019-04-22	204.29 \$	189.0 \$	-1253.78 \$	-7.48 %
BABA	90	2019-04-22	185.195 \$	169.57 \$	-1406.25 \$	-8.44 %
Total	NA	2019-04-22	99638.5 \$	93230.3 \$	-6408.2 \$	-6.43 %

Composite Based Portfolio

Ticker	N Shares	Purchase Date	Initial	Current	Abs Change	Returns
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	ACB		1832		2019-04-22		9.1 \$		8.68 \$		-769.44 \$		-4.62 %	
	AMD		597		2019-04-22		27.9316 \$		27.5 \$		-257.67 \$		-1.55 %	
	MBRX		11261		2019-04-22		1.48 \$		1.16 \$		-3603.52 \$		-21.62 %	
	KEYW		1487		2019-04-22		11.21 \$		11.22 \$		14.87 \$		0.09 %	
	RAD		1718		2019-04-22		9.7006 \$		9.13 \$		-980.29 \$		-5.88 %	
	STLD		500		2019-04-22		33.335 \$		30.02 \$		-1657.5 \$		-9.94 %	
	Total		NA		2019-04-22		100015.0 \$		92761.5 \$		-7253.5 \$		-7.25 %	

Whenever you measure returns, the output is saved as a report into the database, you can access it with `report` :

```
(beta): report
```

Pos	Id	Date	Name
1	1	2019-04-26	6 Big Stuffs
2	2	2019-04-27	6 Big Stuffs
3	3	2019-04-27	Test
4	4	2019-04-27	6 Big Stuffs
5	5	2019-04-28	One One
6	6	2019-05-18	Glorious Investment
7	7	2019-05-19	6 Big Stuffs

```
--> Report ID ? (Id): 1
```

You can recall previous portfolio to list their stocks tickers and/or to reinvest in them with `portfolios` :

```
(beta): portfolios
```

id	Date	Name	Tickers
1	2019-04-23	Apple Test	AAPL
2	2019-04-23	Test Apple	AAPL
3	2019-04-23	Test	AAPL

```
--> portfolio ID ? (Id): 4
```

```
--> invest or view tickers? (i/v):
```

SmartBetas - Regenerating the documentation

Clone or download the repository on your computer:

```
git clone https://github.com/epfeff/smartbetas.git
```

Make sure that the required libraries are installed on your computer:

```
pip install pydal
pip install sphinx
pip install rhinotype
```

Navigate to the documentation folder and if necessary, update the version in `conf.py` . Once the changes are completed (either on `index.rst` or in the code), regenerate the PDF and HTML.

```
cd smartbetas/docs/source
... edit/changes ...
cd ..
Make rinoh
Make html
```