



FactorEngine

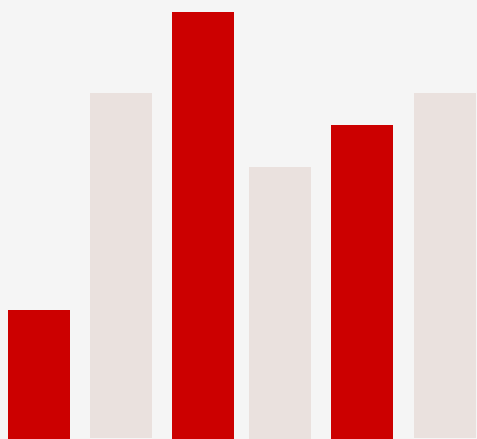
Quickly build, backtest, and
manage investment strategies

+1 312.237.4720

INFO@FACTORENGINE.COM

FACTORENGINE.COM

What is Factor Engine?



FactorEngine provides **portfolio managers** and **quantitative investors** with intuitive web-based tools to build, backtest and manage strategies. FactorEngine provides easy access to quality S&P data in a format suitable for rule-based strategies. Many ideas can be prototyped faster with FactorEngine, which can then be fed into tools like ClariFi for further analysis.

GET MORE FROM YOUR DATA

Save time by not having to deal with data nuances or writing complex SQL. We have built many mechanisms to overcome the pitfalls of financial data such as N/A numbers in sparse preliminary reports. Our pre-built factors handle N/A's efficiently and use alternate algorithms to come up with the best possible result. Alternatively, you can still create your own factors with complete control by accessing the raw line items.

Use Cases

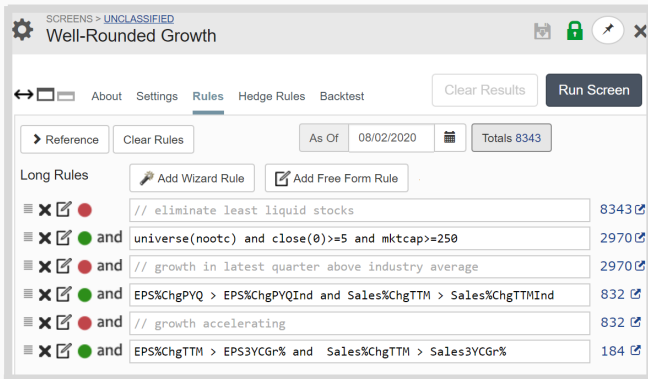
- Test and refine your ideas by running realistic **simulations** using historical data
- Run hundreds of permutations with one click
- Export **point-in-time factors** in bulk
- Import your own factors and time series data
- Automate tasks using our **API** or our DataMiner application
- Import your holdings or transactions and track your strategies in real time
- Flip through and analyse stocks in seconds with all the essential factors laid out in our well organized stock pages
- **Backtest** a combination of strategies and see the correlation between them as well as the return statistics
- Chart historical fundamental factors

Benefits

- Quickly run sophisticated simulations (e.g. 20 years with weekly rebalances in under one minute)
- Intuitive website design with low latency and highly responsive pages
- Many **pre-built** factors and strategies included
- **Save time** by not having to deal with financial data nuances or write complex queries to retrieve the data you need
- Collaborate on a project in groups

CORE COMPONENTS

FactorEngine is designed to get you quickly to the answers you seek. Our rule syntax, for example, is an Excel-like language that allows you great power, requires little learning time, and is enjoyable to use.



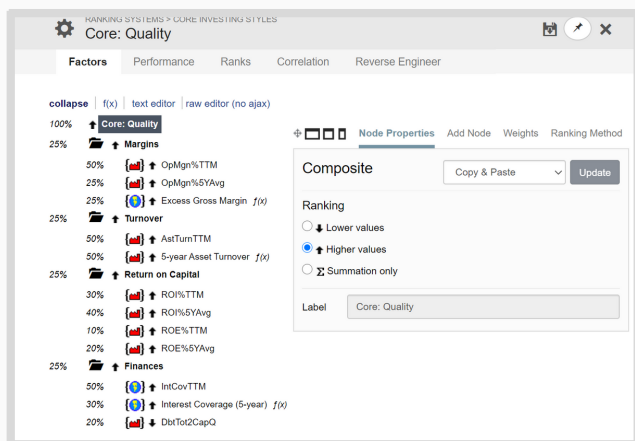
Our versatile screener

Screener

Ours is the most usable yet powerful stock screener available. You can use your own universe, rank with your multi-factor rank, and run backtests or rolling backtests. Many pre-built screens are available to help you get started.

Ranking

You can easily create multi-factor stock ranking systems and run performance backtests. Each factor can be weighted and ranked against all other stocks in your selected universe or GICS level.



Multi-Factor Ranking

Strategies

Test your hypothesis by running a realistic strategy simulation. A strategy is specified using an intuitive wizard to set up your money management rules, your universe and ranking, rebalance method, and the buy & sell rules. Once you are satisfied you can launch a live strategy to track real time performance and get buy/sell recommendations.

Extensible

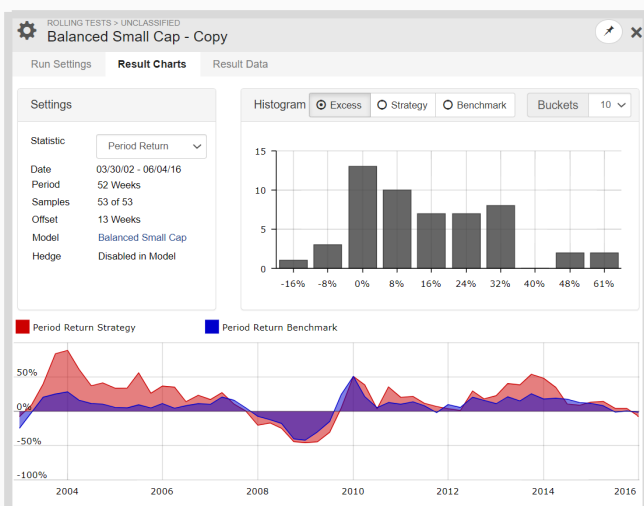
Import your own point in time stock factors or series and use them seamlessly in your rules.

Collaboration

All of the analysis can be shared across your entire organization or smaller groups.

Advanced Tools

With a single button push, the **Optimizer** runs strategy or ranking test cases for multiple time periods or with variations of your rules. It displays the results side by side for quick, easy comparison. **Aggregate Series** allows you to create your own breadth indicators for example. A **Book** lets you combine multiple strategies into a single one.



Rolling strategy test

DATAMINER & API

DataMiner allows you to run hundreds of operations with one click. Specify the operations using human readable instructions, with **no programming** skills required. The output is in plain text so it can be easily imported to other systems or reports. DataMiner is built on top of our API and can run on Windows, Mac or Linux.

Run Strategies

Run batches of strategies for powerful data mining, run robustness tests, or get current results. Operations can be fully automated with no user input required.

Download Data

Download overall **ranks** and composite scores in bulk. You can also specify a complete ranking system in the instructions file. Easily **extract factors and formulas** for any period, ticker, or universe. You can also download future performance for a point-in-time date that you can use as training data for your AI system.

Customizable

DataMiner is an open-source Python application that leverages FactorEngine's API. Let us know your needs and we can add operations or different output layouts.

API

The API access provides on-demand enterprise access to our point-in-time factors and simulation engine.

Data Miner
input Session

Validate Execute Copy output Save output Auto save output (C:/p123App)

Input Output

Metric	Bucket 1	Bucket 2	Bucket 3	Universe
Core Growth; 3 Buckets; 2010-2020; 3Mo Rebalances				
Annualized return	9.37	12.55	13.52	11.84
Average excess return	-3.99	-0.81	0.16	-1.52
Total return	144.72	226.00	255.00	205.94
% periods outperforms	46.34	48.78	63.41	53.66
Max gain	16.81	17.65	19.62	18.04
Max loss	-17.51	-15.86	-18.96	-17.45
Max gain single stock	787.97	256.71	236.26	787.97
Max loss single stock	-99.03	-98.49	-81.90	-99.03
Avg excess Up Markets	-0.24	0.16	0.62	0.19
Avg excess Down Markets	-3.15	-1.23	-1.94	-2.10
Sharpe	0.61	0.84	0.87	0.78
Sortino	0.82	1.14	1.18	1.05
StdDev	17.32	15.54	16.18	16.18
Max Drawdown	-32.04	-26.25	-29.20	-27.63
Beta	1.22	1.15	1.19	1.19
Alpha	-5.55	-2.17	-1.84	-3.19
Avg # of positions	930.71	949.41	962.66	2842.78

Console

Clear

2020-08-03 11:29:01,293: Output saved to C:/p123App/rankperfor
2020-08-03 11:29:01,278: Done (RankPerformance)
2020-08-03 11:28:52,955: Running (RankPerformance)
2020-08-03 11:28:52,943: Input validated

Multi-factor bucket performance

Data Miner

Validate Execute Copy output Save output Auto save output (C:/p123App)

Input Output

Date	UID	Ticker	Pr2Sales	PiotFScore	%From SMA(200)
2020-01-04	4737	IBM	1.56	6.00	-1.10
2020-01-04	4773	INTC	3.78	5.00	17.14
2020-01-04	5881	MSFT	9.44	8.00	16.60
2020-02-01	4737	IBM	1.67	5.00	5.75
2020-02-01	4773	INTC	3.88	4.00	22.75
2020-02-01	5881	MSFT	9.76	8.00	21.20
2020-02-29	4737	IBM	1.51	5.00	-4.31
2020-02-29	4773	INTC	3.37	4.00	4.61
2020-02-29	5881	MSFT	9.29	8.00	11.60
2020-03-28	4737	IBM	1.25	5.00	-19.66

Console

Clear

2020-08-03 11:18:32,101: Output saved to C:/p123App/data_2020080
2020-08-03 11:18:32,084: Done (Data)
2020-08-03 11:17:22,189: Iteration 5/5: success

Point-in-time factor download

Data Miner

input Session

Validate Execute Copy output Save output Auto save output (C:/p123App)

Input Output

```

1 Main:
2   Operation: RankPerformance
3   On Error: Stop
4 Default Settings:
5   Vendor: Computat
6   PIT Method: Prelim
7   Buckets: 3
8   Start Date: 2010-01-01
9   End Date: 2020-01-01
10  Rebalance Frequency: 13Weeks
11  Universe: Prussell 3000
12  Benchmark: SPY
13  Minimum Price: 3.0
14 Iterations:
15   - Ranking: "Core: Growth"
16   - Ranking: "Core: Value"

```

Console

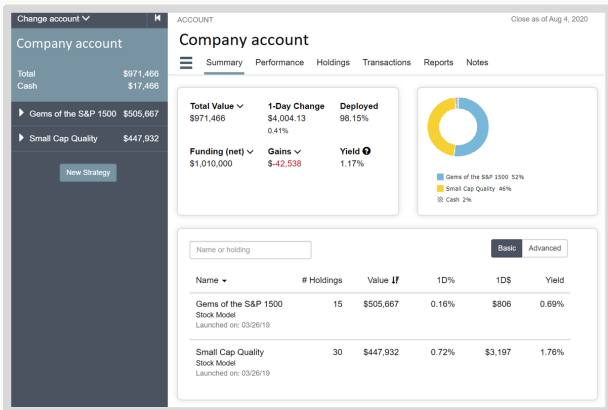
Clear

2020-08-03 11:28:51,049: Input validated

Sample operation specification

FOR PORTFOLIO MANAGERS

We've reimaged many tools for portfolio managers alongside our tools for bottom-up research. All the tools are well integrated allowing you seamlessly transition between development, research and managing portfolios.



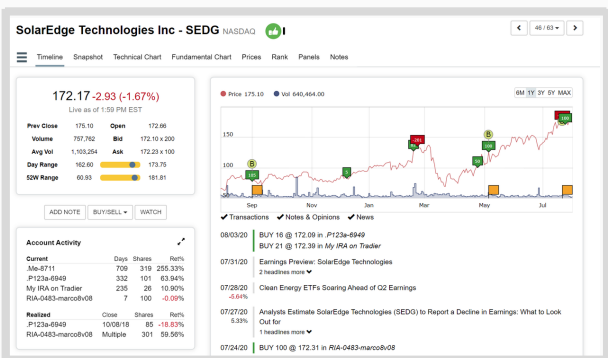
Account dashboard

Accounts and Strategies

Create an account to track your rule-based strategies and manual strategies together. Real time quotes from IEX are included.

Research Pages

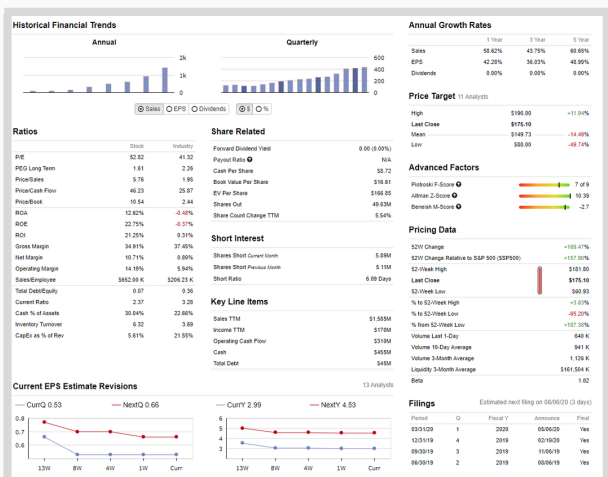
We offer a variety of individual stock pages. For example, our **snapshot** paints a complete picture with the right number of ratios and charts. With **stock panels** you can create your own report by choosing from a list of almost 50 data panels. Our **fundamental chart** can chart any factor or formula. In the **timeline** page you can add your own notes and opinions.



Stock timeline with annotations

Access the Past

You can view current as well as inactive stocks in the past in our research pages. For example, **stock compare** lets you compare a stock from the past to stocks in the present, including itself.



Stock snapshot details

Utilities

We asked ourselves why we had to use different websites for things like stock **notes**, **reminders** and **opinions**. So we added them in a cohesive way. Many providers have watchlists, but you will not find more versatile ones anywhere else.

Broker Connectivity

Factor Engine is fully integrated with Interactive Brokers and Tradier. We have experience with broker APIs and FIX and we can help you create the broker interface you want.

ABOUT US

FactorEngine is developed by Prism Research Inc, a financial software development & consulting company based in Chicago. The company was founded in 2004 to allow anyone to create rule-based strategies and run backtests. Their first product, Portfolio123.com, was launched to allow anyone to design and simulate a rule-based mechanical strategy that combines technical and fundamental data. The company's products are used by individuals, professionals, research providers and many schools, including top MBA programs at Stanford and Cornell.

SUPPORT

At any time, our entire team is available to speak with you. Our team of product specialists provide training and ongoing assistance. Our IT group can answer all your technical questions and discuss custom solutions.

INFO@FACTORENGINE.COM

+1 312.237.4720

FACTORENGINE.COM

