AlgoDynamix

Regional Finalist

The UBS Future of Finance Challenge

Forecasting Risk in Financial Markets through Artificial Intelligence

Brokerage, wealth management and agency (client) trading use cases

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Introductions: senior leadership

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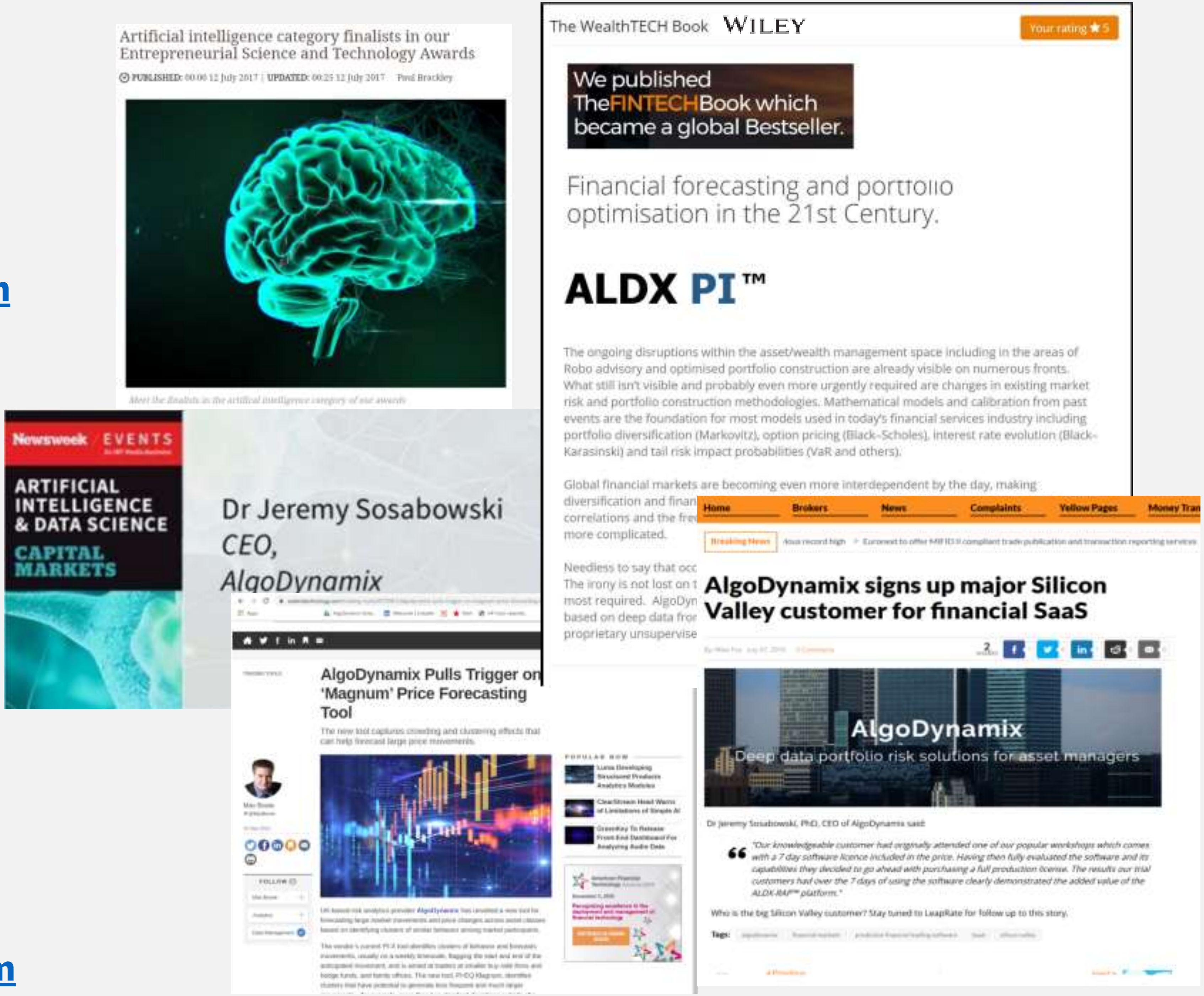

Forecasting: directional insights!

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Financial risk forecasting providing days advance warning of major <u>directional</u> market movements. Example showing Up Flags (U1, U2) followed by End Flag (E3) on equity markets

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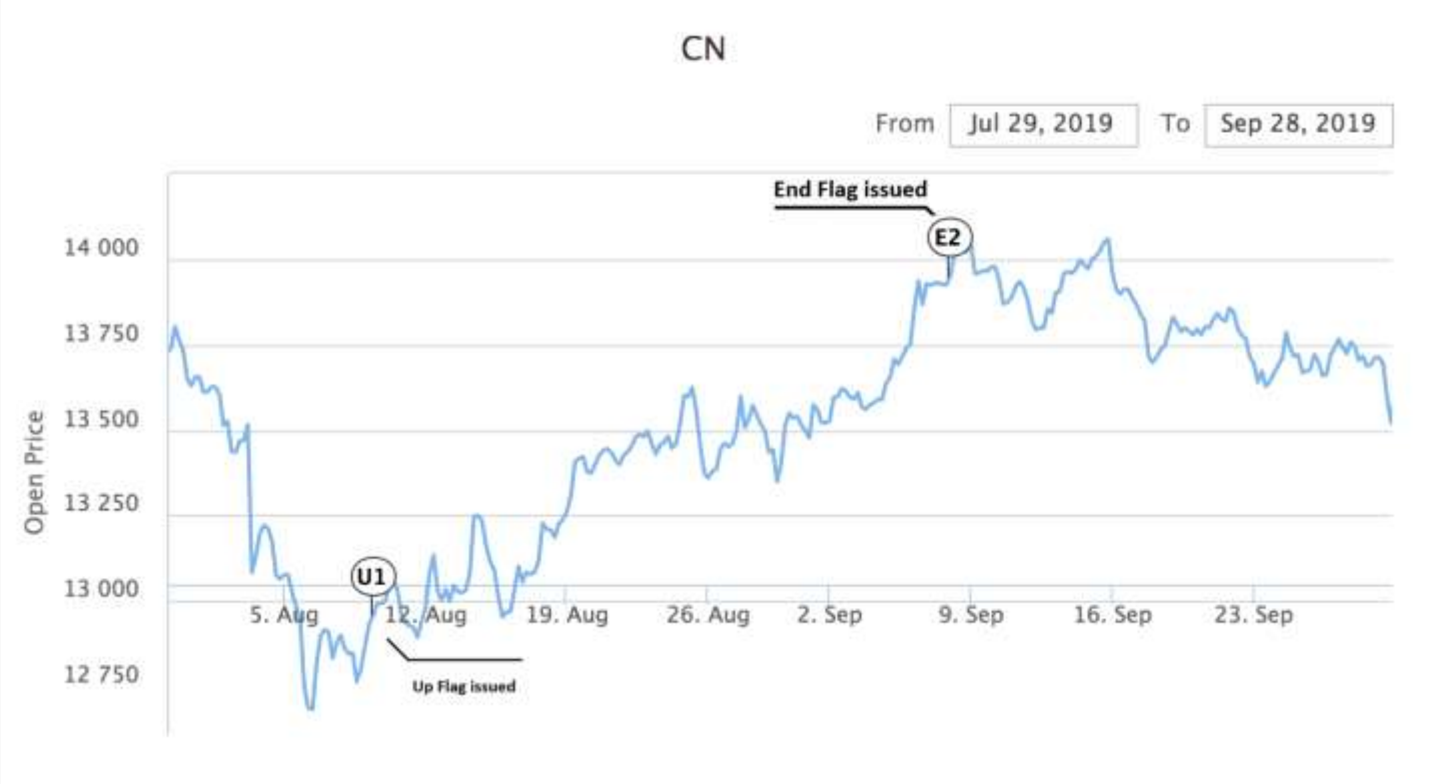

Financial risk forecasting providing days advance warning of major <u>directional</u> market movements. Example showing Up Flags (U1) followed by End Flag (E2) on equity markets

Forecasting: directional insights!

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Financial risk forecasting providing days advance warning of major <u>directional</u> market movements. Example showing Down Flag (D1) followed by End Flag (E2) on currency markets

異常檢測實例

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金融风险预警工具提前几天或几小时提供重大市场方向走势的预测。图中实例展示了我们的工具所提供的黄金下跌标识(D1),(D2)与随后的结束标识（E3）

Different types of Machine Learning:

Supervised

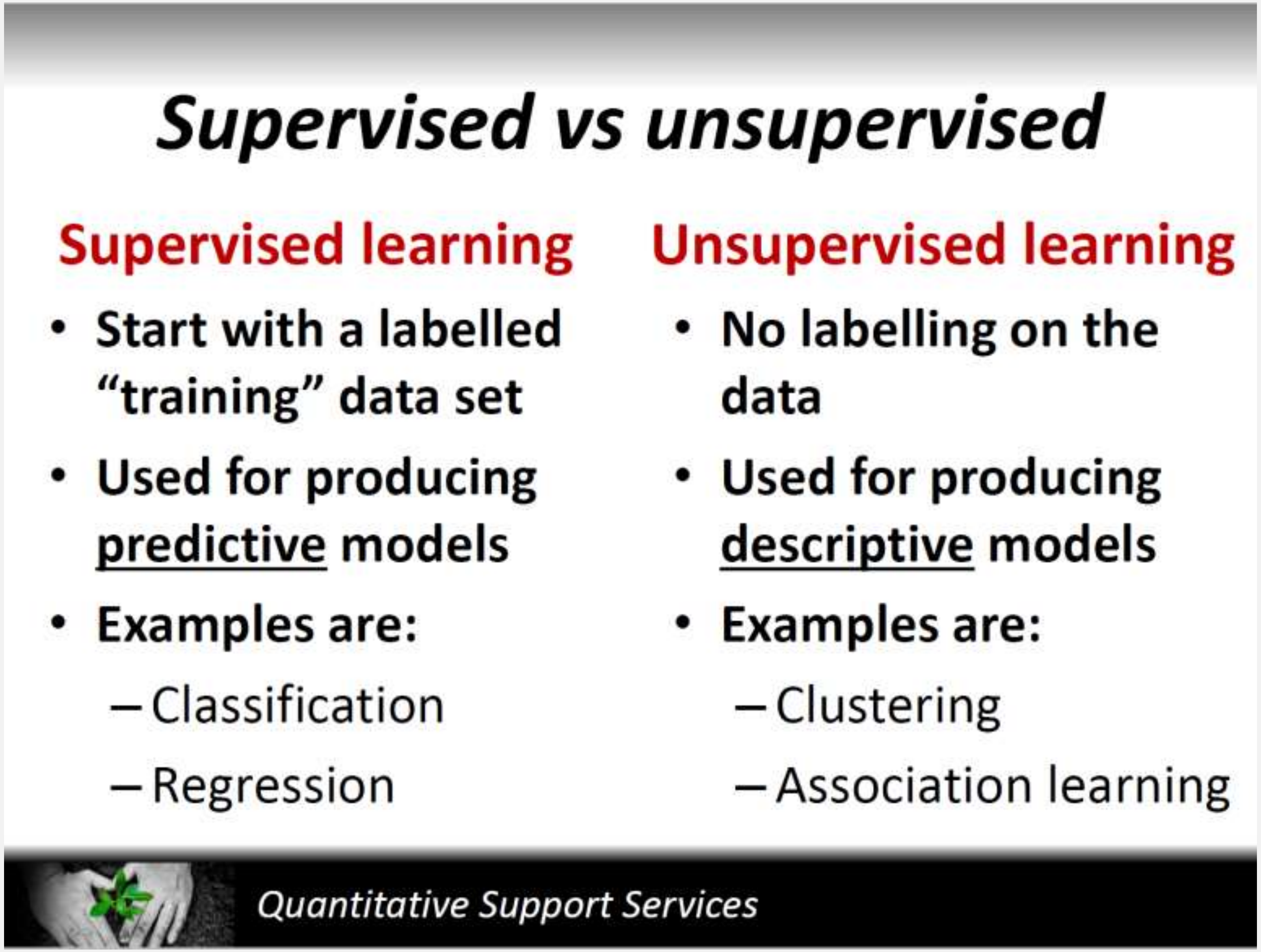
Supervised learning

- **Start with a labelled "training" data set**
- **Used for producing <u>predictive</u> models**
- **Examples are:**
  - Classification
  - Regression

Quantitative Support Services

→ Works very well if the future looks a lot like the past….

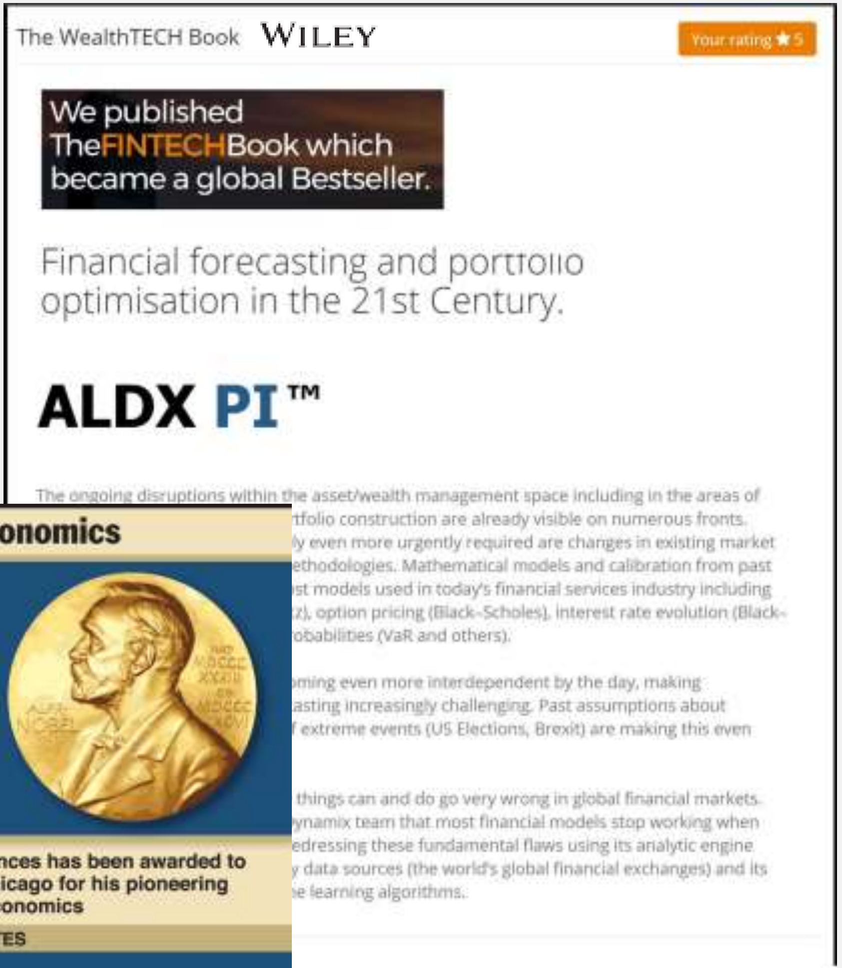
More specific

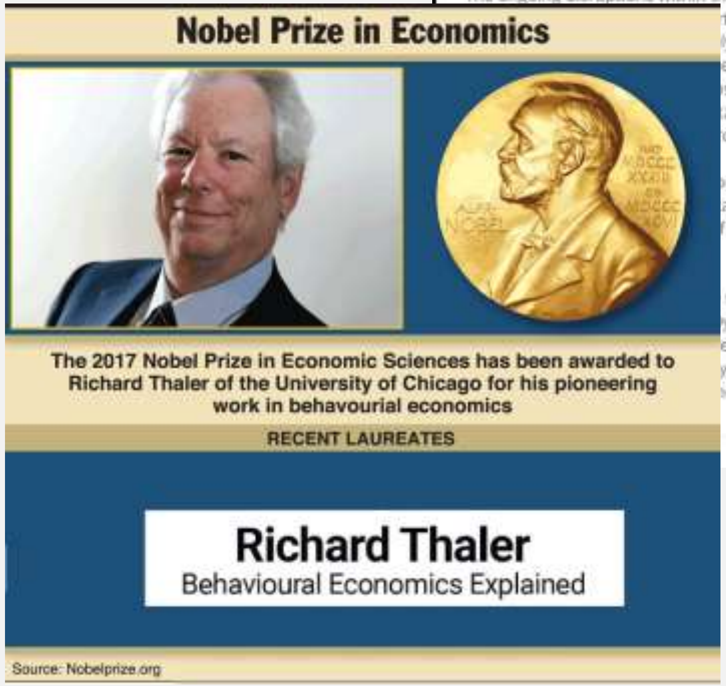


Our Technology

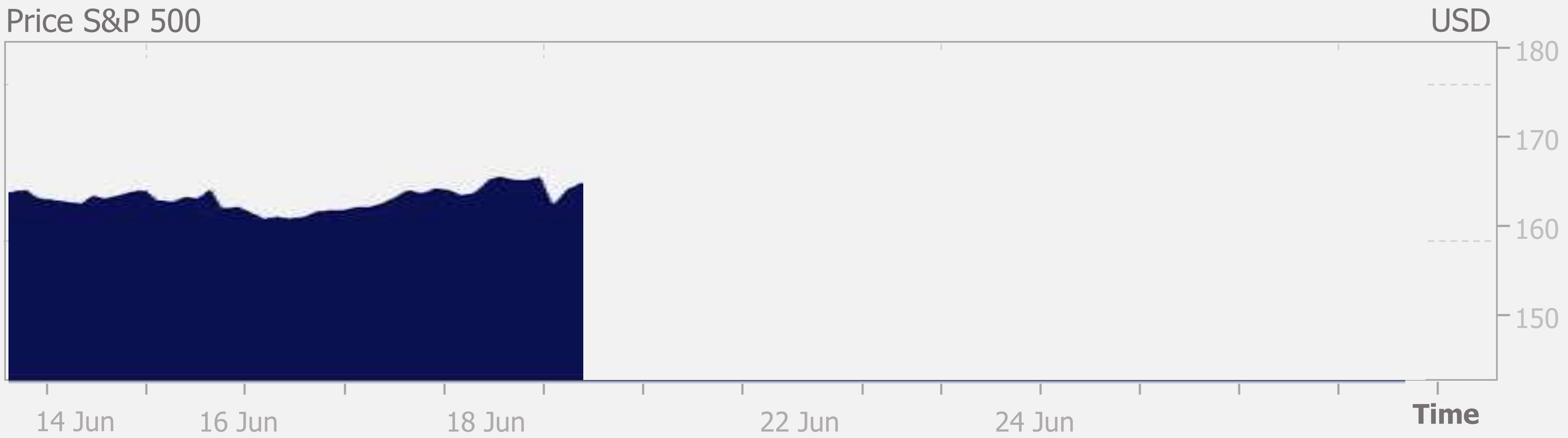
- The AlgoDynamix risk analytics engine is based on deep data agent-based algorithms scanning - in real-time - multiple quantitative primary data sources (order books).
- These algorithms analyse the dynamic behaviour of market participants, i.e. buyers and sellers, through our unsupervised machine learning technology which clusters them based on common feature sets.
- Noise classification, cluster identification and behavioural finance theory are part of our unique core capabilities.
- Market anomalies occur when large clusters of buyers or sellers are identified, note that in the following slides everything still ‘looks normal’ but the deep data insights reveal a very different picture.

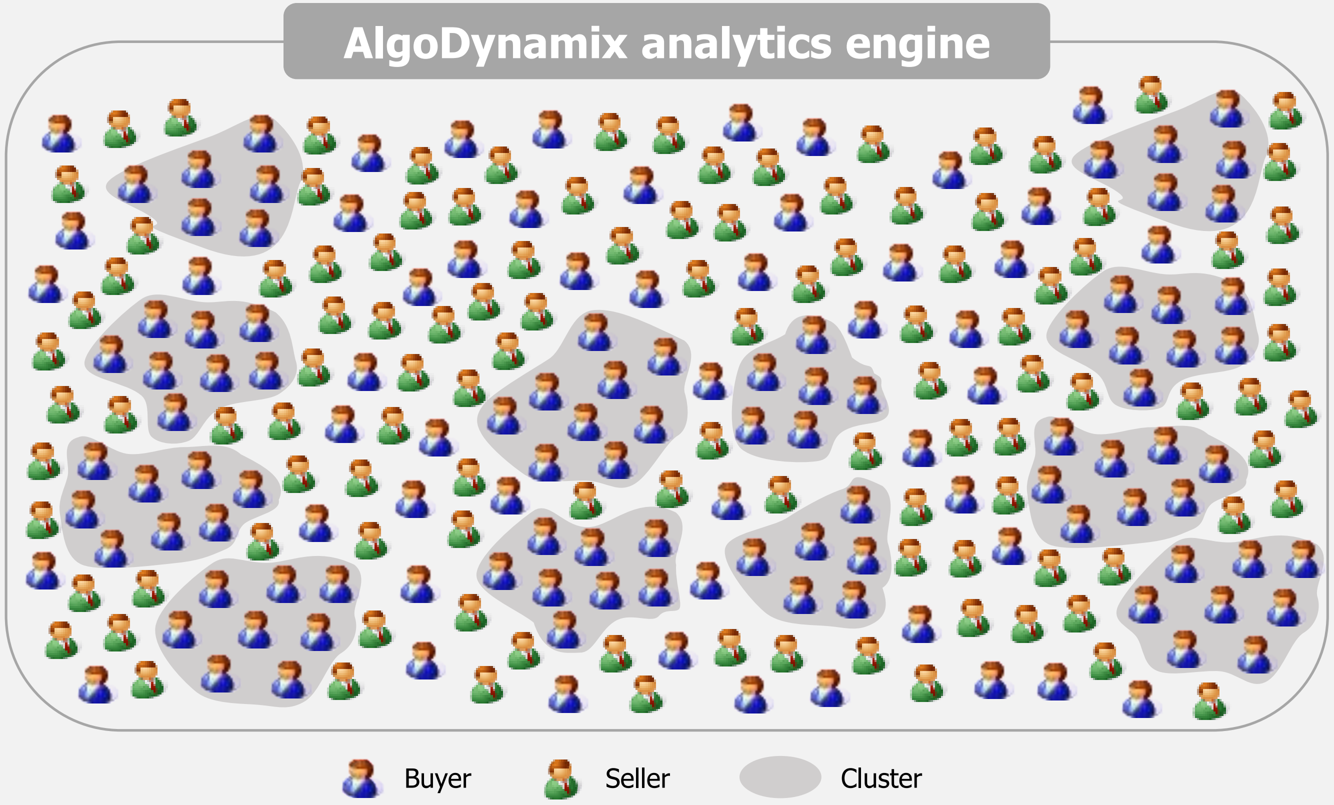
Underlying technology (behavioural)
→'Cluster the limit order book'





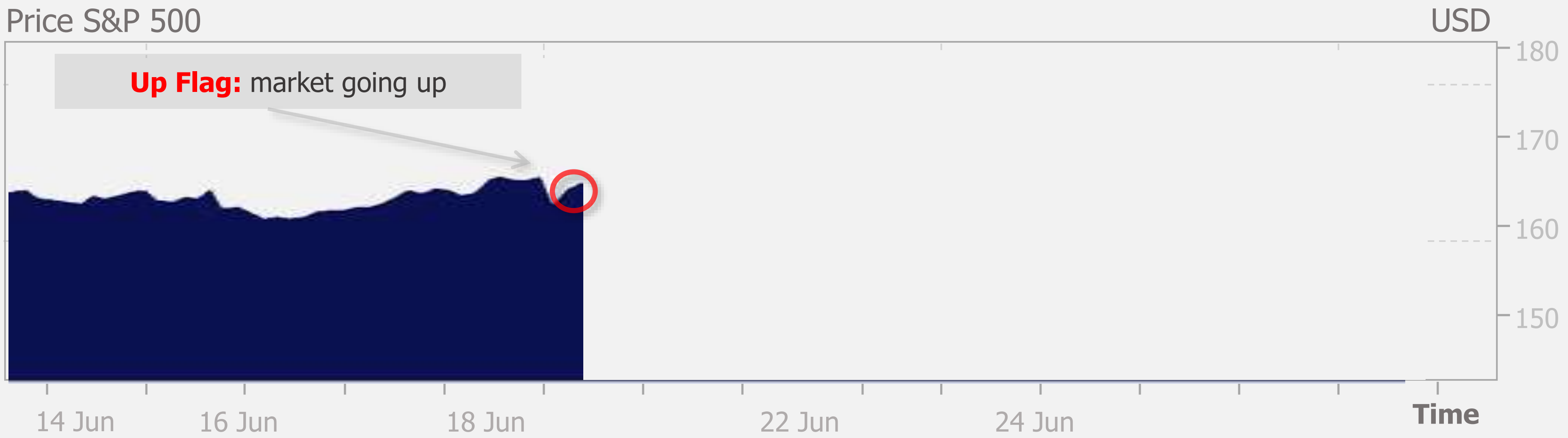
End point

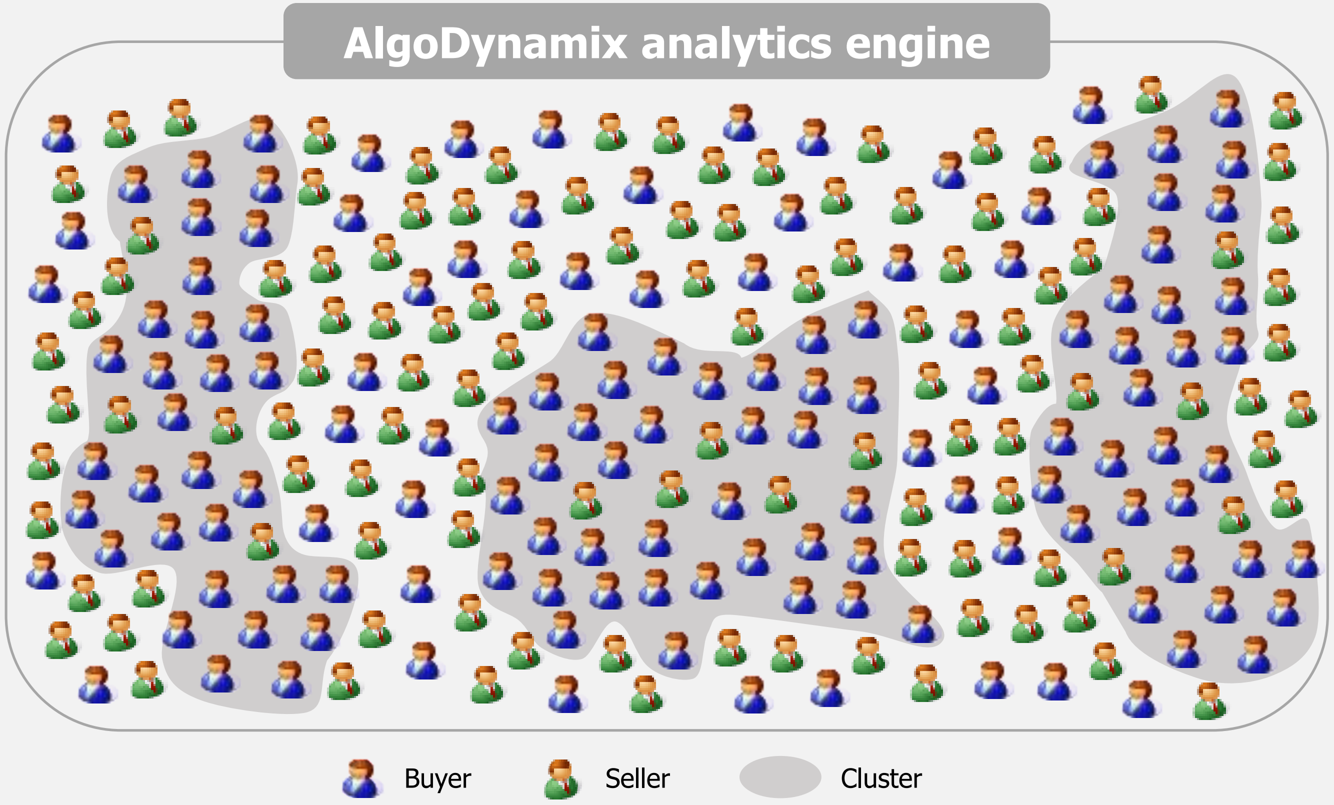




- Software identified ´clusters` of user-behaviour
- Within each cluster, users have comparable feature sets
- Cluster identification amongst noisy buyers and sellers is part of our unique core capabilities

End point





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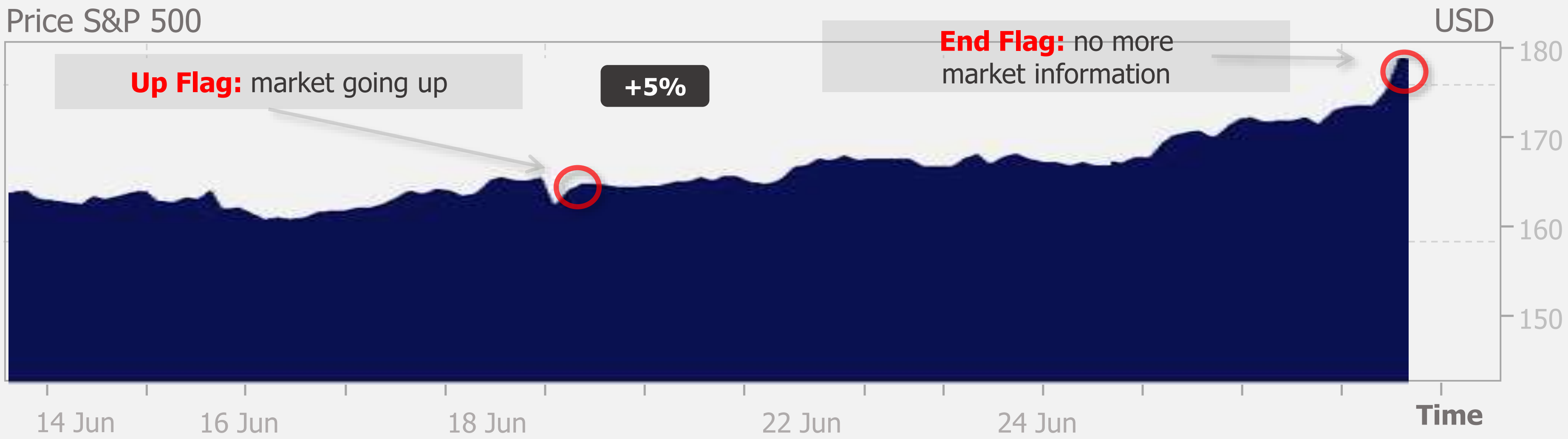

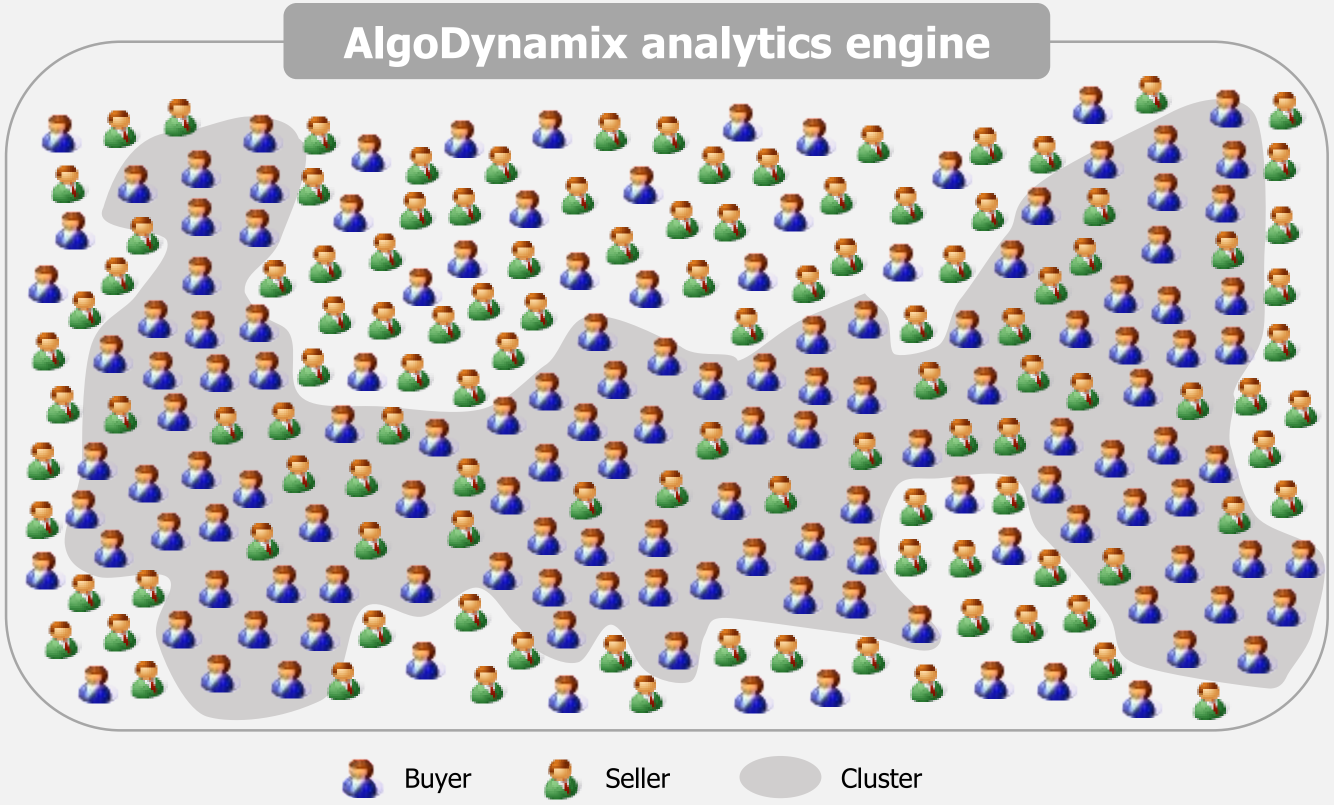

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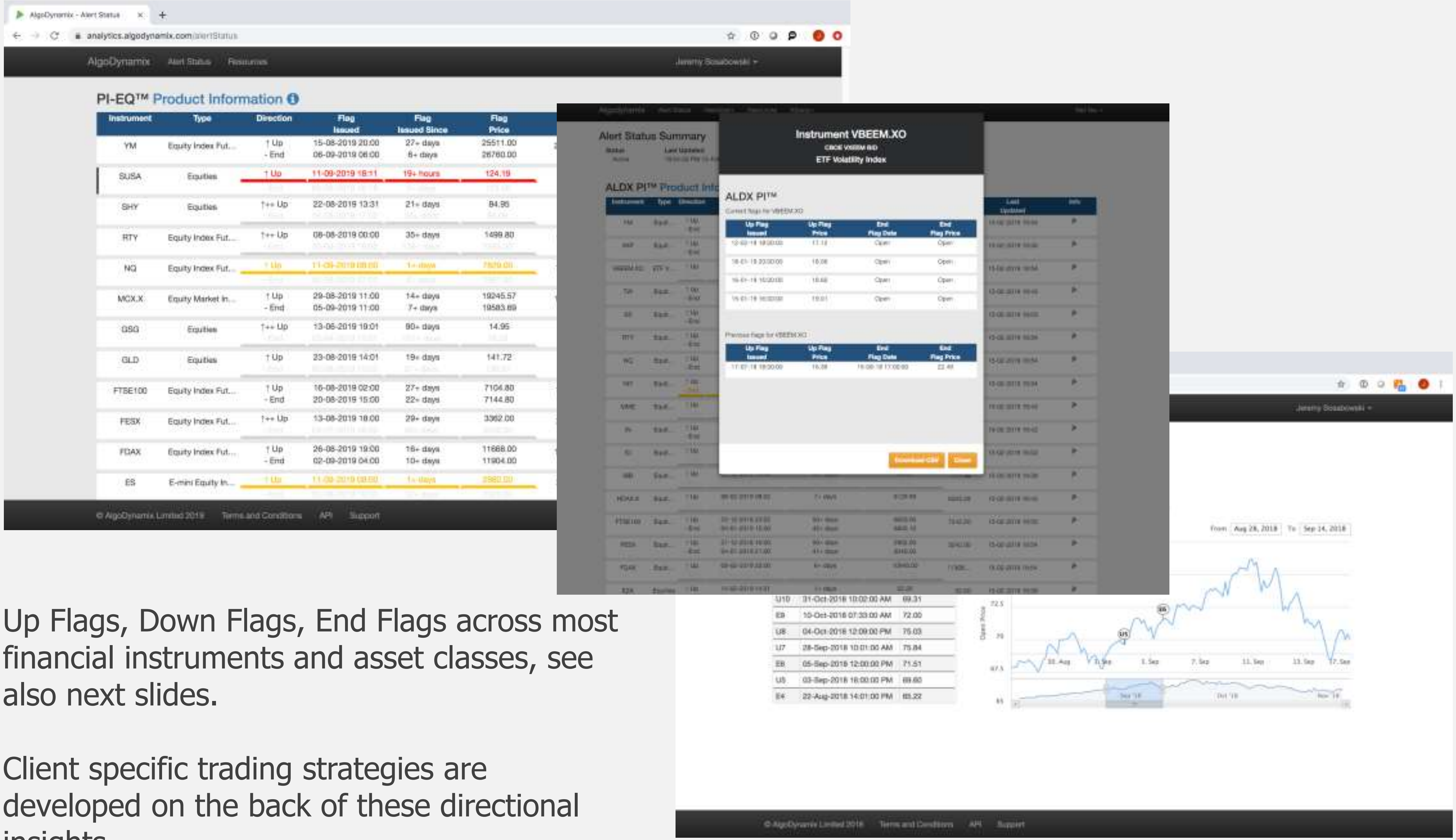
Product details



→ Up Flags, Down Flags, End Flags across most financial instruments and asset classes, see also next slides.

→ Client specific trading strategies are developed on the back of these directional insights.

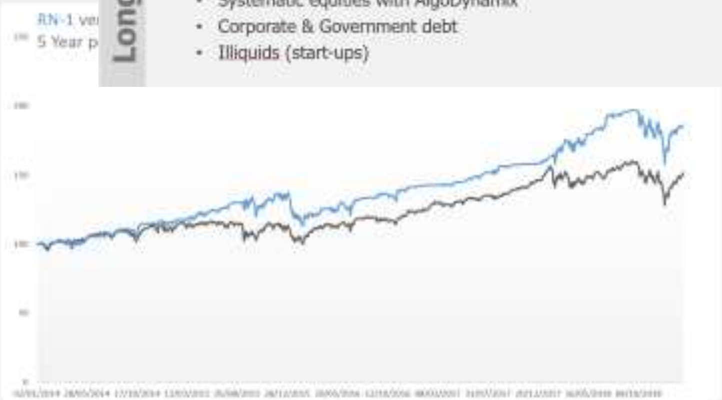
Client use cases

Long-standing US client: Dr Nag

Multi asset portfolio manager:

- Discretionary equites
- Systematic equities with AlgoDynamix
- Corporate & Government debt
- Illiquids (start-ups)

Results, practical trading



Results (live):	RN-1	S&P 500
2018 Returns	+6.01%	-4.38%
Volatility	~17%	~17%

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Maximum diversification portfolio
% outperformance versus benchmark

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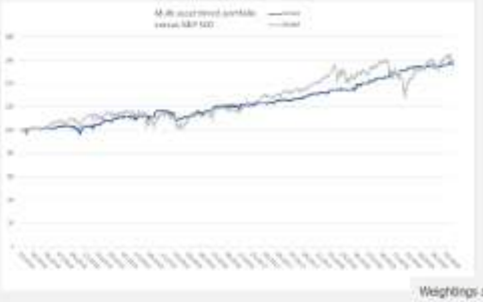


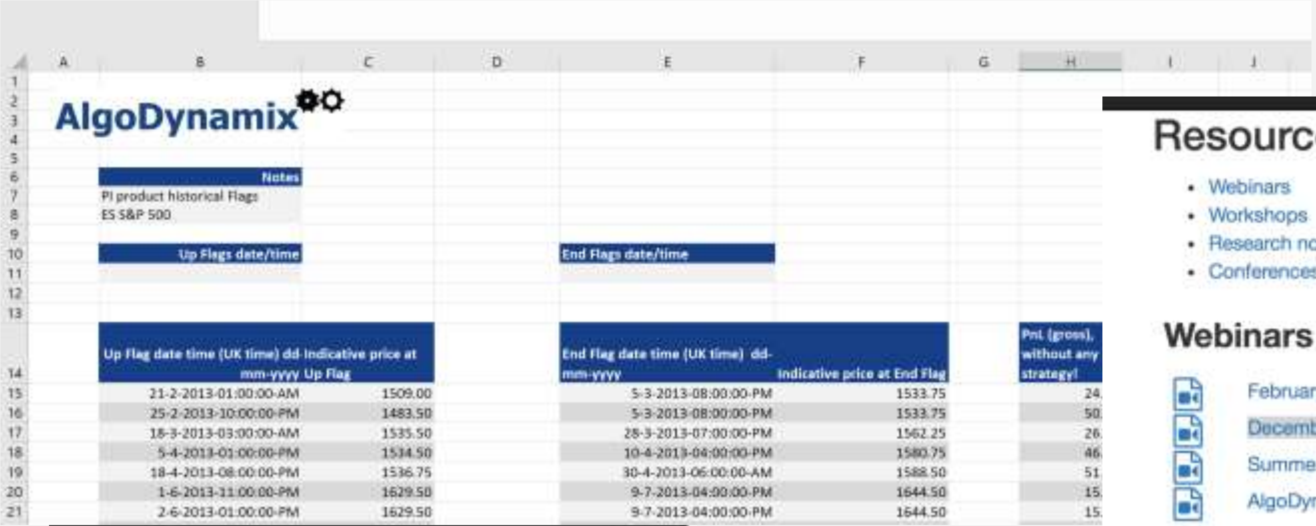
Weightings as below:

Combined portfolio with equities, commodities and gold

- Live use cases: Global active asset managers
- Investment banks: brokerage with some inventory
- Agency trading, client facilitation and in house

Background material

Historical data, research notes etc…



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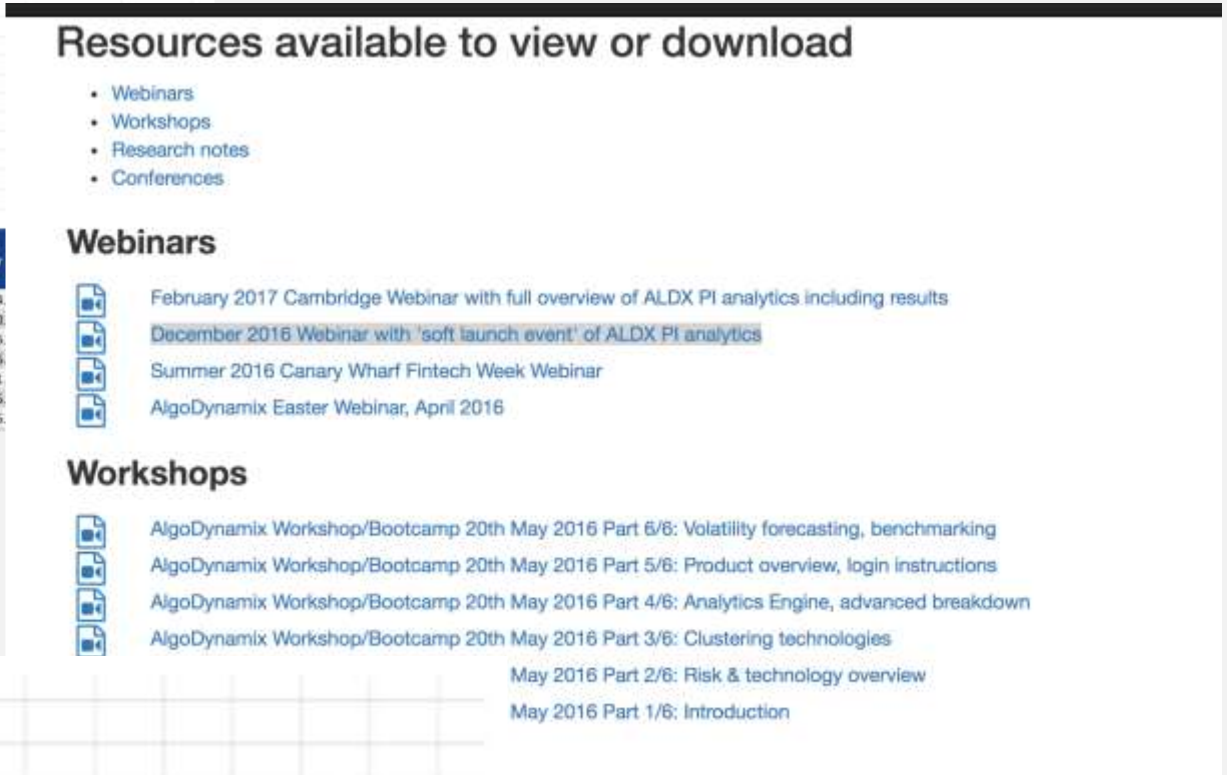
Notes	
PI product historical Flags	
ES S&P 500	

Up Flag date time (UK time) dd-mm-yyyy	Indicative price at Up Flag	End Flag date time (UK time) dd-mm-yyyy	Indicative price at End Flag	PnL (gross), without any strategy!
21-2-2013-01:00:00-AM	1509.00	5-3-2013-08:00:00-PM	1533.75	24.
25-2-2013-10:00:00-PM	1483.50	5-3-2013-08:00:00-PM	1533.75	50.
18-3-2013-03:00:00-AM	1535.50	28-3-2013-07:00:00-PM	1562.25	26.
5-4-2013-01:00:00-PM	1534.50	10-4-2013-04:00:00-PM	1580.75	46.
18-4-2013-08:00:00-PM	1536.75	30-4-2013-06:00:00-AM	1588.50	51.
1-6-2013-11:00:00-PM	1629.50	9-7-2013-04:00:00-PM	1644.50	15.
2-6-2013-01:00:00-PM	1629.50	9-7-2013-04:00:00-PM	1644.50	15.



Resources available to view or download

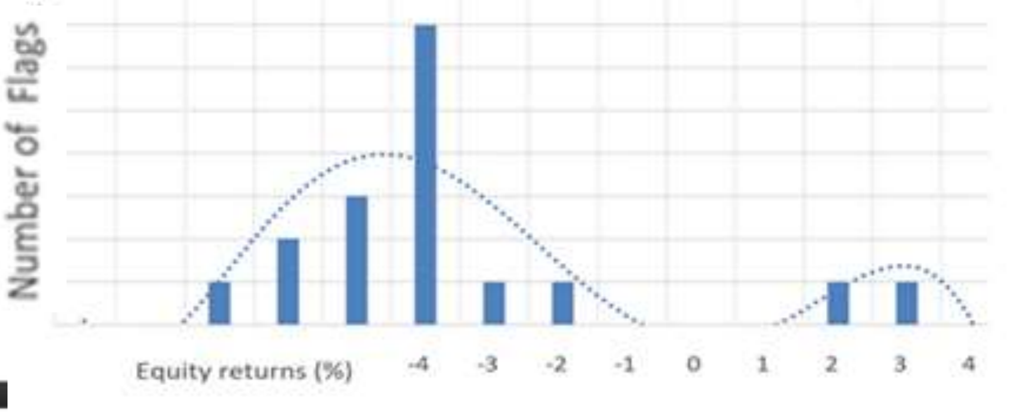
- Webinars
- Workshops
- Research notes
- Conferences

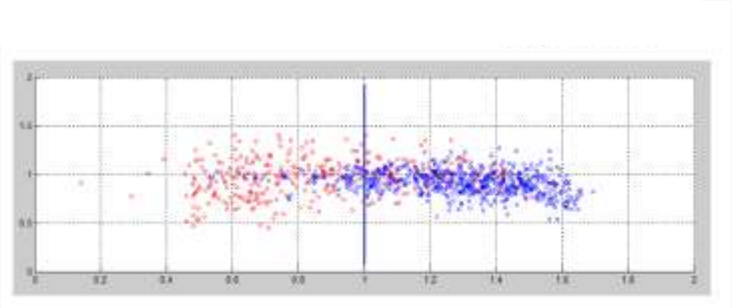
Webinars

- February 2017 Cambridge Webinar with full overview of ALDX PI analytics including results
- December 2016 Webinar with 'soft launch event' of ALDX PI analytics
- Summer 2016 Canary Wharf Fintech Week Webinar
- AlgoDynamix Easter Webinar, April 2016

Workshops

- AlgoDynamix Workshop/Bootcamp 20th May 2016 Part 6/6: Volatility forecasting, benchmarking
- AlgoDynamix Workshop/Bootcamp 20th May 2016 Part 5/6: Product overview, login instructions
- AlgoDynamix Workshop/Bootcamp 20th May 2016 Part 4/6: Analytics Engine, advanced breakdown
- AlgoDynamix Workshop/Bootcamp 20th May 2016 Part 3/6: Clustering technologies
- May 2016 Part 2/6: Risk & technology overview
- May 2016 Part 1/6: Introduction





Contact us

Get in touch.....

We will talk you through how our software analytics might be able to help you

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AlgoDynamix Proof of Value

- Workshop with registration of selected users
- Selection of financial instruments*
  *We do not require any internal or proprietary data sets
- **8 weeks access to risk analytics software**
- Ongoing support

<u>Disclaimer</u>

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