

Second Opinion Analytics Framework:-

Rapid and Custom-built analytics framework for in-house business-experts

Summary:

The revolutionary change big-data technologies tools, which analyze immensely large sets of data, can bring about is that it augment the intuition of the business leaders of every enterprise. However, the danger of relying on a single framework, and its metrics, for all data-driven decision making is well-known from the early adopter of big-data technologies - the financial services industry.

Custom-built Analytics Frameworks, which are designed with the inputs of an enterprise's internal business leaders well-aware of the implications of enterprise internal datasets, are reliable sources of business and second to none. StratEdge provides cost-effective frameworks and consulting services for enterprises to custom build these second-opinion big-data analytics solutions that can augment their primary analytical systems.

1. Data Driven Decision Making

"In God we trust, others should bring data" - Edward Deming

As the world has grown to be more and more complex, decision making - both at strategic and operational levels, has to be made collaboratively by the management and/or analytics teams. Whenever there is no single consensus on a decision problem, it is imperative that the conflicting viewpoints be resolved through mutual agreeable terms by all stakeholders. Data is the key for any team to make collective decisions. Quality Guru Edward Deming's prophetic words have a large meaning in a management decision making by committee context.

Data driven decision making is a significant forward thinking approach towards prescient business decisions. The culture of Data-driven decision making can foster greater cohesion between the various stakeholders of an enterprise as the entire process of decision making becomes very transparent.

2. Data Fundamentalism:

"....with enough data, the numbers speak for themselves." - Former Wired editor-in-chief Chris Anderson

As the culture of Data-driven decision making is taking its deep roots, an unjustified belief and assumption that "More the data, better the validity" is also getting imbibed into the culture. There are already several critics like Kate Crawford, who question this unfounded belief and warn that such assumptions can derail the adoption of Big-Data technologies. In her article in the Harvard Business Review, Kate calls the blind faith in bigger and bigger datasets as data fundamentalism which assumes that correlation always indicates causation, and that massive datasets and predictive analytics always reflect objective truths.

Nassem Taleb, the author of the famous book, "The Black Swan" notes - "The more frequently you look at data, the more noise you are disproportionately likely to get (rather than the valuable part called the signal); hence the higher the noise to signal ratio". Taleb suggests that bigger and bigger datasets will ironically amplify the wrong signals as insights instead of invalidating them.

3. It's about the Models

"All models are wrong, but some are useful." - statistician George Box

The real takeaway from the criticisms of Data Fundamentalism is that Big-Data analytics are more about the analytical models used in the decision making rather than the big datasets. Better Models can triumph over bigger datasets when it comes to accuracy of the predictions and discovery of underlying signals in the datasets. As even the best model still makes some underlying assumptions about the business while analyzing the data, having multiple models with separate and independent variables can help analysts to make sure that insights derived are consistent even under different assumptions.

When analysts can check the veracity of a result by cross-verifying two or more different models, the analysis can be relied on more strongly.

4. StratEdge 'Second Opinion' Framework

Financial and operational feasibility in terms of cost and effort can be big hurdle for analysts to build and manage multiple models. A Second Opinion Framework would be a big-welcome only if:-

- a. The analyst can get a customized solution - quick and cost effective;
- b. An Out-of-Box Analytics Framework with components that can be pluggable into existing datasets.

StratEdge 'Second Opinion' Framework is designed to fit exactly these business requirements. StratEdge Framework has components like correlation matrix, with all the visualization, data retrieval and statistical computing components tied up together. These components can be easily custom-fitted to the specific business cases and results obtained within short duration.

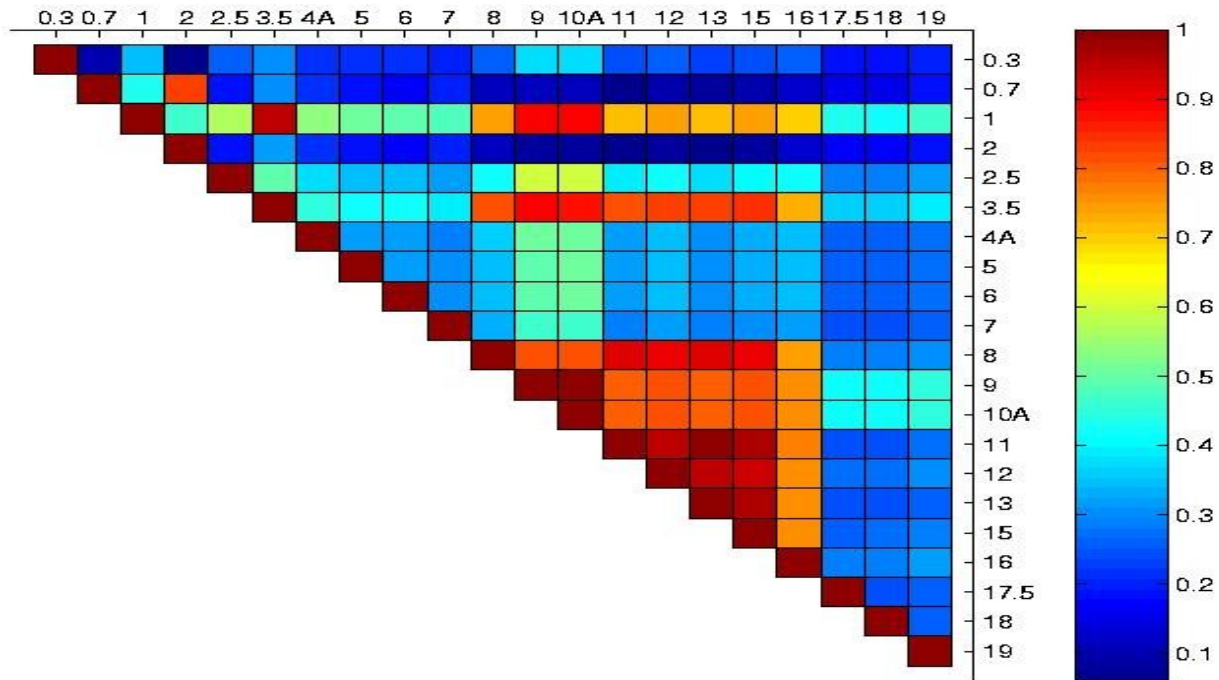


Fig.: Correlation Matrix Component applicable for multiple business contexts

5. Conclusion:

StratEdge's Big Data consulting team can provide custom analytic solutions co-designed with an enterprise's in-house business experts and rapidly developed using reusable data-analytics components. These custom-solutions can augment out-of-box big-ticket big-data solutions and can act as second-opinion analytics suite.

6. References:

1. The Hidden Biases in Big Data by Kate Crawford

http://blogs.hbr.org/cs/2013/04/the_hidden_biases_in_big_data.html

2. The End of Theory: The Data Deluge Makes the Scientific Method Obsolete By Chris Anderson

http://www.wired.com/science/discoveries/magazine/16-07/pb_theory

3. Big Data Roundup: Correlation vs Causation

<http://www.forbes.com/sites/gilpress/2013/04/19/big-data-news-roundup-correlation-vs-causation/>

4. Blinded by Big Data: It's the models, stupid

<http://readwrite.com/2013/05/20/blinded-by-big-data#feed=/author/matt-asay&awesm=~od3cDoFpG5nkc3>