

BizAnalytics

Machine Learning Explained

April 10th, 2019



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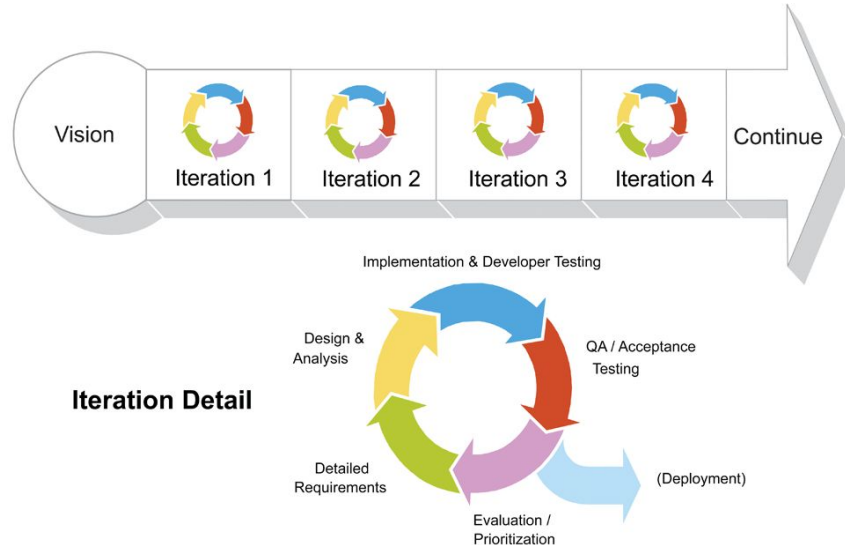
One of a kind

BizAnalytics is one of a kind in the Business Engineering market

- It focuses on understanding the client's business, and then **it helps them improve** their areas of opportunity.
- It implements fully Agile Processes **adding value on each working session.**
- It is not a technology company. Instead, it delivers end-to-end solutions to its clients using **Smart Technologies only as a driver.**

Interdisciplinary Process

With an interdisciplinary process we allow clients to participate in each working session with **clear visibility** on the value being added at each step of the process.



Technology is a commodity

We believe Technology is a commodity, and we can add more value by partnering with our clients. **If they are successful, we are too.**



Machine Learning

What ML can do for the business?

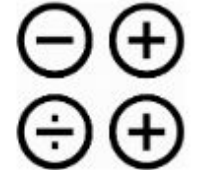


Machine Learning

Machine Learning is a branch of the Artificial Intelligence based in statistical math intended to answer **complex questions**.

Machine Learning combines statistics with mathematics and programming into a specific type of program called a model or “machine” that can process and **learn from provided data**.

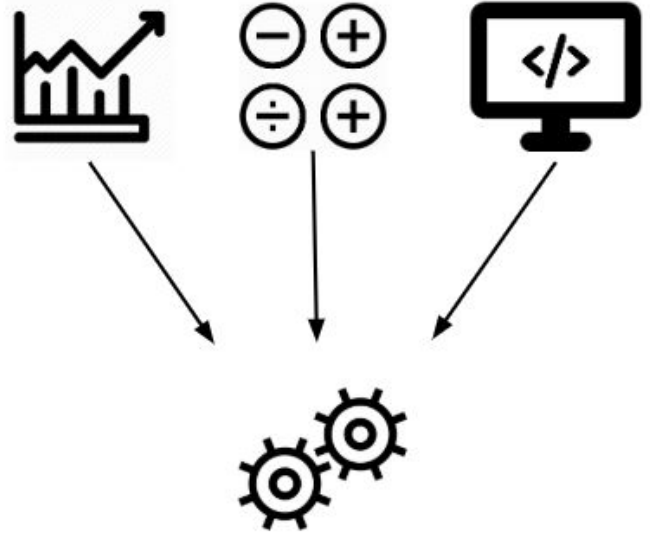
It's often related to Big Data, Data Analysis, and Artificial Intelligence although it's more close to applied statistics.



Machine Learning

In a general explanation, a Machine Learning model is **created**, **trained** with a subset of the available data, **validated** with the remaining data, and after a few iterations of adjustments it's ready to start working using the learned "connections".

Some models can evolve and/or learn while they do their final task too, increasing its efficiency above its competitors which usually analyze, process and then apply.



Machine Learning

Real Life Examples explained



Leads Quality

Many companies have sales departments fed by leads sources. The conversion rate of those leads it's usually not very high (typically 25%).

With a large number of leads processed and a Machine Learning model, we can **understand the relationship** between the initial lead info, and the likelihood of the lead to be converted, allowing the company to:

- Reduce the sales force working on leads
- Prioritize leads and work on the most likely to convert
- Therefore, improve the conversion rate
- Identify “time-wasters” reducing salespeople’s frustration and costs

Predicted Revenue

After a lead is converted into a sale, revenue is usually generated. In most cases, there's a relationship between a lead and its potential revenue if converted into a sale.

However, such relationship may not be linear, and a Machine Learning model called Regression can help predict it, with the following benefits:

- Prioritize leads leveraging those with higher predicted revenue
- Forecast, including planning and budgeting
- Increase revenue by assigning your best resources to work on leads with higher potential

Segmentation

An airline would like to promote a destination to avoid closing a route. For that, they have a budget (\$) but they want to focus in the segment of audience that have the highest potential to buy tickets.

A Machine Learning clustering model can help finding out how the overall audience for that airline looks like related to one or more dimensions like annual salary, \$ spent a year, age, gender, ethnicity, etc. This could result in:

- More sales/return per dollar invested in promotion/marketing
- More focused marketing plan/ad/spot

Recommended Products

An online big marketplace would like to increase sales by implementing a “recommended products” section/plan. It has a big users database with full history of products they bought and they saw.

Based in the history, a Machine Learning model (Association Rule Discovery) can find the relationship between two or more products related to the likelihood of being bought resulting in:

- List of products to recommend for each target user
- Prioritization option based on buying likelihood
- Finding products that not even the user thought of creating needs

Thank You!

Q & A?



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