HELP YOUR BUSINESS WITH BIG DATA AND AI

Many organizations are unsure how to get started with big data and assume they need to make big investments in tools and trained staff but, according to Lisa Kart, research director at analyst group Gartner, that could be the wrong approach.
ETL-based data integration is a labor-intense manual process following a discover, conceptualize, develop, and test cycle, leading to several months of implementation time.

"ETL comes from the three basic steps: *Extracting* data from the source, *Transforming* the way the data is represented to the form expected by the destination, and *Loading* the transformed data into the destination system."

60% of big data projects will fail to go beyond piloting and experimentation, and will be abandoned. Gartner

A big reason for the long-term projects is that Data Scientists spend a lot of the time preparing "big data" infrastructure and cleaning up data that can be analyzed. This will increase projects' risks and made them extremely expensive and not affordable for most of the companies.
A new approach permitting to take advantages of the new emerging technologies has to be developed and exposed to organizations, seeking to exploit their data with less cost, less duration, and more clarity on processes and project's outputs.

By automating the processes that business depends on, organizations can gain a lot of time and money.

From where the data come?

Before, only big corporates or organizations, which have a huge customer base, are concerned with big data. Obviously, they had the ability to gather information throughout the several decades of their existence.

Now, the situation is changing and startups nowadays can gather a tremendous amount of data just in few months. Web scrapping, bulk emails, mobile and web applications, social media, etc. are all tools that boost the collection of data in a very short period and create the urgent need to exploit them never than before.

Why exploiting these data?

Like any other project, Big data projects have either to realize financial profits or remove some pains. Situations, where it's beneficial to analyze data efficiently, are numerous. Below are some cases:

- Automating and unifying processes and infrastructures to speed up business operations and information queries.
- Analyzing customer preferences to adjust products accordingly and increase sales.
- Evaluating surveys and match results with present and past offers.

"Big Data means a large chunk of raw data that is collected, stored and analyzed through various means which can be utilized by organizations to increase their efficiency and make better decisions."

The myth of the big investment

Vendors like Apache and Amazon has reduced the licensing cost of Big data tools making them cheaper. Alongside they are bringing up new tools and techniques aiming to help businesses crunch through the collecting data.

Besides that, Cloud computing is also enabling Big data technologies and platforms available to the start-ups and smaller organizations at a lower cost. No need for investing a huge amount to set up large-scale data centers.

Consequently, human resources are the main success factor.

Experience and expertise are keys

There are excellent tools for visualization and analysis. But, most of the time is spent moving and transforming data into a single place. There are excellent solutions to dealing with analyzing and visualizing data once it was in a single place, but there were few solutions for processing that data quickly and few engineers using those solutions.

On the other hand, knowledge of data clustering and analyzing only is not sufficient. Engineers must have strong skills in programming, cloud, security, etc. to complete the set and realize the desired objectives of the project.

Thus, the learning process in this field is not short, which makes considering a specialized third-party partner a good option.

"Artificial intelligence (AI) is giving a computer or computer-controlled device the ability to perform intelligent tasks such as reasoning or learning from experience."

Beyond Big Data

Machines could now look at amounts of data that they'd never been able to access before. In fact, the amount of data being created is too much for humans to process. Moreover, it becomes more efficient to teach computers how to learn than to teach them how to perform every possible task and give them the information needed to complete those tasks. This led to the development of Artificial Intelligence (AI) and Machine Learning (ML).

Applications of AI/ML

AI has many applications either in communication with people or in very advanced fields, such as aviation and medicine. Following are some of these applications:

- Automate customer service that's just as useful as human customer support.
- Roll out recruiting chat-bots that can automate repetitive communication tasks.
- Screen resumes, rank candidates and estimate their success in a given job.
- Take trading decisions based on learning patterns.
- Analyze the market, trends and customer feedback to help marketers and sales managers make better decisions.
- Learn, detect, and predict which types of users are more likely to become clients.
- Recognize text and analyze information to reveal spams, viruses, and intrusions.

Advantages

Companies are now taking advantages from big data and machine learning. Since competition is tough, companies that do not follow the new technologies risk finding themselves outpaced in just a few years.
Enhancing productivity, increasing sales and customer satisfaction are the main advantages that AI can give to business owners. Studies show that companies adopting AI and ML have boosted their performance.

Rogers Telecom 53% fewer customer complaints	**SciSports Pro** Sports 200,000 players analyzed to find the next star
Honda Manufacturing <60 secs to identify suspicious claim	**SunTrust** Financial Services 90% improvement in response rate

Source: SASSoftware Jun 6, 2018

The button line

Big data and AI/ML are enabling companies to perform better and realize more profit. On the other hand, their implementation should be studied well beforehand. There are many tools available on the market and relatively few experts capable of delivering the desired results. Be cost-conscious because big data ≠ big cost.

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