BIZCOMMUNITY

Understanding data science for business value

By Wikus Combrinck

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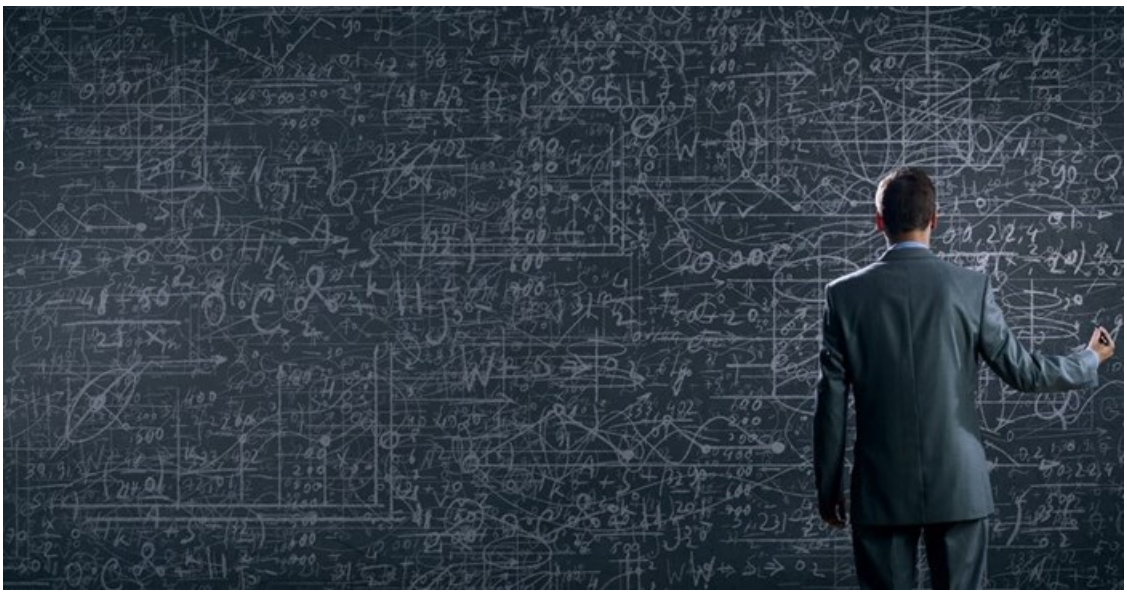
The world is slowly turning to data for decision making and with the amount of data generated in the technology era, data science has become a hot trend, increasing the demand for data scientists.



But what is data science? Is the field new? Does it only involve big data? How does it differ from statistics and analytics? These are frequent questions among businesses and consumers alike. According to New York University, one way to consider data science is the next step in fields like business analysis that incorporate computer science, modelling, statistics, analytics, and mathematics.

Data science involves using automated methods to analyse large amounts of data and to understand its meaning. Data scientists, therefore, are largely responsible for gathering and managing an organisation's data in a way that makes a difference and is meaningful to business decision makers.

The rise of everything 'smart'

Soon everything will become intelligent: we will not only have smartphones but also smart homes and cars, smart factories and smart cities.

While most people can see how certain information would be useful and what sort of insights might be derived from it, most lack the technical skills to perform the analytics.

They might not have the computers that are able to carry out the large volume of calculations quickly enough to take action. But more often they lack the analytical skills to tell the computer what to do.

The need

Thus, there is a strong need for professionals who understand data, who have experience working with major database platforms and have strong analytical, quantitative and problem-solving abilities.

These individuals are able to assist organisations to make better decisions by directing actions based on quantifiable, data-driven trends, which in turn help in defining goals. They are also able to challenge staff to adopt best practices and focus on issues that matter, adding great value to the overall business.

The struggle

Data scientists with the right set of skills – coding, statistics, machine learning, database management, visualisation techniques, and industry-specific knowledge – are hard to find.

This is mainly because many university students are studying subjects that do not support the need in business for science, technology, engineering and maths (STEM) as well as future-oriented skills. Businesses are thus faced with a challenge in finding appropriately trained graduates with complex problem-solving skills, critical thinking, good judgement and decision-making, as well as cognitive flexibility that can address business needs.

The opportunity

As such, there is a real opportunity for undergraduates to reap rewards by studying subjects that teach computational thinking and focus on real-world applications of problem-solving, such as data science. Organisations also need to embark on programmes to address this skills shortage challenge.

Tracker, which built its reputation as South Africa's leading stolen vehicle recovery brand, is evolving to capitalise on the vast quantity of data that it collects on a daily basis, which currently exceeds 40 million packets of information per day in real time.

Our real-time traffic feeds and traffic incidents are used daily by various partners to ensure our customers have the most convenient and safe journeys. We have also released a vast amount of machine learning algorithms into production over the past two years, including customer profiling, road anomaly detection and road conditions.

Creating resources for the future

For this we require the scarce resource of data scientists and we are therefore investing in a number of initiatives to ensure that we are part of creating these resources for the future.

We are proud to be the first EMEA company to roll out a data science internship programme on the Microsoft Professional Programme in Data Sciences in 2017. The internship, which received over 150 applications, will enable four students to be exposed to real-world scenarios and assist the Tracker Business Intelligence resources on machine learning and research projects.

We also sponsor five students from Sol Plaatjie University in Kimberley that are busy with degrees in data sciences and is part of the Big Data Careers initiative that was launched by the Square Kilometer Array in 2015.

We hope that our initiatives encourage scholars to take an interest in STEM subjects and related IT fields.

ABOUT THE AUTHOR

Wikus Combrinck is general manager: business intelligence competency centre at [[http://www.tracker.co.za/ Tracker SA]].