The 5 types of Data professionals

There are numerous types of Data challenges in today's world, from autonomous cars to fraud detection. Different challenges require different skills, so you can't expect a mathematics professor to build a Big Data infrastructure just like you can't expect an experienced software engineer to build a state-of-the-art Machine Learning model.
You first need to understand the problem you want to solve, define the business case - and only then look for the right Data professional.

One of the biggest mistakes I keep seeing in my years in the industry, is companies hiring the wrong type of Data professional to solve their problem. In the Data domain this is especially painful, mainly because of confusing terms such as "Big Data" and "Deep Learning".

In this article I will discuss 5 different Data-related challenges, and share my opinion on what kind of professional is needed in order to solve them.

The Data Analysis Ninja

Unlike a programmer or a researcher, the Data Analyst can come from backgrounds such as business and economy. For that reason, there are many Data Analysts in the market today, and in comparison to Data Scientists their salary is lower. Usually a start-up company with a small-medium volume of data can get a lot of benefit from this type of Data professional, who is very agile, focuses on data analysis and runs various SQL queries on Data sources and platforms to find golden nuggets. This professional also fits companies that need a more creative business perspective and are less interested in building a Big Data infrastructure and Machine Learning algorithms in the current stage.

The Big Big Big Data Engineer

The Data Engineer is a crucial role for companies with medium to large to very large volume of data. The Data Engineer is the one who will build the infrastructure for your data pipeline, and use AWS, GCP or Azure services for it. They will be responsible to prepare for scale, build a monitoring framework and find and filter fraudulent users. In addition, they will cleanse and enrich the raw data from the Data Lake, to prepare it for the Data Analysts and Data Researchers.

The Business Intelligence Expert

This professional goes hand-in-hand with the Data Engineer: The BI Expert works with management stakeholders, and lead the data view of the company. They usually own the Data and BI team and are responsible for the methodology and data flow. They can also architect and build the Data Model and various dashboards on top of it, using a modern BI tool such as Tableau.

The product Data Scientist (the classic one)

This one is the classic Data Scientist, which can usually be found in companies with Data products. They are not supposed to build a cutting-edge technology, but rather focus on improving the product using Machine Learning. Most of the classic Data Scientists have at least a bachelor's degree in science, statistics, math and/or engineering, and a 3-years minimum experience as a Data Analyst or a Junior Data Scientist in a team. They have to have programming skills using R or Python, and knowledge in Machine Learning and Deep Learning. They can work as part of R&D as a single Data Scientist, or as a part of a Data Science team building the product. They usually need a Data Engineer to implement their models as a working product in production.

The Professor

A.K.A “The Researcher”; This one has a master’s degree or a PhD in a science field, and a passion for researching data and technology. They usually have expertise in a specific Data Science field. Companies that will look for this type of Data Scientist are usually well-funded or a major tech company (e.g. FB, Google, AWS), who’s breaking the bleeding edge in Machine Learning technology. The Professor sometimes have poor skills in SQL, databases and coding, so they may need a hands-on Data Scientist or Data Engineer to run their models and experiments. Keep in mind that projects that suit this type of Data Scientist can last for years and be very expensive.

Summary

There are many Data professionals out there, and most of them have several different skills.
The product Data Scientist is the classic one: he’s the one that competes on Kaggle and builds models. But - from our experience - in most Data projects building models is only about 20% of the entire project. Monitoring, research, data infrastructure, modeling, cleansing, enriching, etc. - are a big part of the data challenges we all face today in 2019, and you really don’t need a Data Scientist for all those.

When you search for a Data professional, start with thinking about your business challenges, the volume of data you have now and in the foreseeable future, the scale, the tools, the budget and the product.
Try to think of the 5 types of Data professionals we mentioned above as a combination: maybe you need someone who's 40% Data Analyst, 40% Data Engineer and 20% product Data Scientist - so the right Data professional for you is a very hands-on Data Scientist.
Or maybe you need someone who's 50% Data Researcher and 50% product Data Scientist - so this will be a researcher who also knows how to get a model to run in production.
Maybe you even need a BI Analyst (50% BI Expert, 50% Data Analyst) or a BI Developer (50% BI Expert, 50% Data Engineer), and not a Data Scientist at all...

Feel free to reach out.
We respond quickly and will love a short conversation to understand together what types of Data professional you really need.