

# The Cultivation of Business Analysis Talents in the Background of Big Data

Kaixuan Liu

Applied Statistics, Zhejiang University of Finance & Economics Dongfang College, Haining,  
314400, China

Corresponding E-mail: [angela@cas-harbour.org](mailto:angela@cas-harbour.org)

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**Abstract.** With the development of economic globalization, people have entered the era of big data, business analysis plays a vital role in the development of enterprises. It can be said that every industry needs relevant business analysis in order to get the most effective decision for the development of its industry. As a result, there is a growing demand for business analysts and their capabilities. Through the analysis the conclusion has been drawn that a qualified analyst must master all kinds of business analysis tools, possess excellent business analysis thinking as well as the good communication ability and the capacity of solving problems. Therefore, the schools and universities should establish a corresponding education system including teachers, courses and practice in order to cultivate the future business analysts for the society.

## 1. Introduction

The coming of big data's era represents a further leap in the development of various industries. With the rise of artificial intelligence, mobile Internet and the Internet of things, the application of big data has become increasingly wider and will also bring unlimited imagination and commercial value[7]. How to apply data resources at a deep level to maximize the value of the system, how to explore the commercial value in big data to obtain profits is something that an industry must do [2]. So this excavation process can also be called business analysis. With the further study of big data, business analysis has been further improved, and has gradually become the backbone of promoting the development of the industry. However, as a new research direction, there is an extreme lack of qualified business analyst in the industry and schools also lack the corresponding professional settings or the education can not keep pace with the development of the industry. Moreover, students are not able to apply what they have learned in the university into practice. This paper will demonstrate the development of business analysis and predict the developing trend in the future. In addition, this paper will discuss the skills and tools that a business analyst need to master. This paper aims to provide the students and schools with a comprehensive introduction of business analysis and the orientation of the cultivation of a business analyst accordingly.

## 2. Background information

### 2.1 What is Business Analysis (BA)?

Some people call data science the sexiest profession since the 21<sup>st</sup> century. And business analysis derived from the data science, it refers to the economic benefit analysis of the scheme, from the financial point of view to further judge whether it is in line with the objectives of the enterprise. In fact, data science is a combination of several technologies and processes for data processing, and other analysts can get the most valuable business point of view[4]. Therefore, it is necessary to involve application algorithms and mechanical programs, so as to get useful business insights. The technology of data analysis is applied to the industry, and the best business decisions are obtained to verify the current model and theory, so that the industry holders can maximize their profits.

## **2.2 What is the big data?**

Gartner, the world's leading research and consulting firm, defines big data as “high-capacity, high-speed or highly diversified information assets that require cost-effective and innovative information processing that enhances decision-making, insight and process automation.” [4] With the progress of technology, the data is also growing. Big data does not just mean massive and diverse data processing, but also a subversive way of thinking, an intelligent infrastructure and an innovative technological revolution[6]. Big data is not data stored on a computer, but a large amount of non-aggregated raw data stored in different places, and more data are generated from various channels every minute and every second[4]. With big data, data analysts can handle more data and have the ability to handle a large number of records with multiple attributes. Big data is very important and needs to be analyzed so that we can get useful information and make the best business moves.

## **3. A New Trend in the Development of Business Analysis**

The development of business analysis has made great progress, and in many fields BA began to occupy an important position. The accurate decision-making through business analysis is the lifeline of the development and survival of the enterprise, so the demand of the industry for the depth information is particularly strong[1]. So what is the trend of business analysis in the future? Therefore, only by understanding the development trend of business analysis in the next few decades, can people conform to the development trend of the times and choose a more suitable way for themselves.

### **3.1 The boundaries of business analysis will gradually blur**

The solution of the future data analysis problem is not limited to solving the problems of internal data collection and data analysis, but will get more external data through more data interfaces. People pay more attention to the problems that the data itself can solve and the value of the data. One of the simplest examples is the evaluation of customer value. Through the analysis of customer purchase preference, the customer value can be subdivided, and the purchase habits, time and place of customers can also be analyzed to determine the new sales ideas of goods[1].

### **3.2 The increasing requirement of collaborate ability in the office**

The traditional data information exchange mode is one-way, which is the transmission mode from the data center to the individual user, and the future mode will not only be limited to this, but also can realize the reversible transmission from the individual to the data center. Therefore, the future business analysis and collaboration model will be more and more rich, full of imaginative space.

### **3.3 Artificial intelligence and machine learning as new growth point**

The previous data insight and analysis need to drag and drop the data manually, drill through the data and then analyze the data, which greatly reduces the efficiency of business analysis. In the future, machine algorithms and business intelligence will be used to gain insight into data, although it may not be as accurate or reasonable as manpower, but in any case, this new technology is already developing in a more and more mature direction.

### **3.4 Deep learning**

Deep learning is a set of machine learning technology based on neural network. Although it is still in a state of development, it has shown great potential in dealing with business analysis problems. In-depth learning can also be considered as the core technology to lead the development of artificial intelligence for a long time. Hopkins said: the big data era will use a variety of unstructured text, the use of in-depth learning and other advanced analytical techniques to help us in the way we are just beginning to understand[3]. In addition, as more and more complex algorithms become more and more a open-source, more and more open-source frameworks emerge for in-depth learning to help business analysis.

## **4. Skills and Tools that Business Analysts Must Master**

### **4.1 Measuring products by data**

As a saying goes, if we can't create something, then we haven't figured it out yet. As to business analysis, if you can't measure a product with data, that means this analysis is unsuccessful. The same product requires different metrics for different scenarios, so there will be different metrics, and finding the best solution must be done in business analysis. In some supermarkets, there is a system that can carry out a series of algorithms in the background, which can calculate the consumption tendency of the customers, thus determining their value to the company. The calculation is based on what kinds of commodities that the customers choose in the supermarket or how long they have spent in front of the shelves. According to the calculated results, the cashier or the salesperson is able to introduce the corresponding products to the customers, so as to get the most out of them.

### **4.2 Seeking an optimized solution for the company's product development**

Data analysts improve their products and maximize profits by communicating with product managers or engineers and asking them about the requirements. Without a deep understanding of the requirements that the product calls for or lack in the communication ability the the product manager, an analyst cannot be capable of developing a satisfactory product, thus will lead to a considerable loss to the company or even hinder the development of the company. Therefore, business analysts need to have a strong ability of communication and understanding, and quickly understand the needs of others to do a good job in business analysis. In addition, they should be flexible, considerate and friendly to challenging as well, for that they can confront the problem that the manager has not predicted before and overcome it or even develop a better product than everyone has expected.

In different periods of product development, the focus is different. How to determine what period the product development is in and how to find the method to promote the product in different development periods is also the skill that data analysts need to master.

### **4.3 On the use of business analysis tools**

In business analysis, the era of calculating and analyzing all kinds of data by manpower has survived. With the diversity of data, many machine software began to play an important role in business analysis. Data analysts input a large number of data to carry out related machine operations, so as to get the desired results quickly and correctly.

The development of the machine software is also rapidly increasing, from the SQL technology that can only be analyzed in the existing data analysis or in its own database, it is derived to the process and the analysis of the data which can be quickly acquired by using the Python technology. These new analytical software provides a great boost to the conduct of business analysis. Nowadays, there are a lot of data analysis software, such as SPASS, R, SQL, Python etc. Therefore, data analysts are bound to be able to master a variety of data analysis software, in order to better carry out business analysis related work.

## **5. The School of Business Analysis and the Analysis of students' Employment**

### **5.1 There are more and more schools offering business analysis**

With the gradual maturity of business analysis theory, a large number of colleges and universities have opened business analysis majors to meet the ever-changing demand of the job market. However, as a new major, there are few universities in China to set up such majors, but in many overseas colleges and universities, they have been opened one after another in recent years. Of the top 100 business schools in the United States, more than 40 offer business analysis courses, it's not hard to predict that more and more schools will open a business analysis course. In particular, the master's degree has attracted the attention of interested students. One of the most representative schools is the MIT, Rochester, UT Austin, Wake Forest U and USC of the United States. And in the

UK, UCL and Edin Burgh MSc also offers corresponding business analysis courses[5]. The business analysis courses offered by these schools will also be adjusted to make the courses more diverse. Therefore, some students with business background (major in finance, financial engineering, business administration, etc.) are fully in line with the application conditions of business analysis major, of course, some students with science and technology background (computer, statistics, mathematics, etc.) can also carry on the further study towards this major.

## **5.2 More choices for students after graduation**

Business analysis is widely used at present, more and more companies have great demand for business analysts, so the students majoring in business analysis have a very good employment direction and prospects after graduation. Some common industries are group companies, IT industries, economic analysis companies, as well as most Internet companies (Google, Amazon, Alibaba, etc.), some professional data analysis companies and large chain trading companies[5].

## **6. Advice for Students Who Want to Study Business Analysis**

### **6.1 Clarify your direction**

Technology and business are two different routes. If there is no certain business knowledge, there will be a trace of incompatibility in the sudden contact with the commercial analysis. Of course, in commercial analysis, it is not only the analysis of this direction, but also includes a series of technical directions such as data mining, programming knowledge. Therefore, before deciding to study business analysis, it is necessary to find out the direction that you want to go, and find the right direction that suits you.

### **6.2 The learning knowledge of the efforts**

No one in the world can get any new skills without learning, not even the smartest people in the world, the most intelligent people in the world. Therefore, hard learning related knowledge is the most important prerequisite for acquiring new skills. The same is true in the study of business analysis, no matter which school, no matter which direction you choose, you should study hard, learn the relevant programming knowledge, the relevant economic knowledge and all kinds of business content. Study hard and enrich your knowledge base.

## **7. Conclusion**

In this paper, the commercial analysis and the meaning of the data science are explained by using the simple language to analyze the business analysis model in the time of large data. The preparation and working steps required for commercial analysis are briefly described, and the development trend of the future business analysis is also discussed. At the same time, it refers to the skills and capabilities that are available to the data analysis personnel and provides some advice to them.

Although the future development of business analysis industry is very hopeful, but not everyone can be perfectly qualified for the job. People still need to learn the relevant knowledge, and learn to be particularly serious, proficient in the tools and skills for business analysis. Only in this way, this industry can be better developed.

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