Data Science and University Education

Jian-Hua ZHANG¹,a,* , Li-Hong YOU¹,b , Feng Li²,c
¹Beijing Normal University Zhuhai Campus, Zhuhai, China
²Jinbei Automobile Co., Shenyang, China
a,zhuhaijianhua@aliyun.com, b,373997951@qq.com, c,2650166@qq.com
*Corresponding author

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Abstract. In view of the current, big data technology has become increasingly popular reality, the author proposes that college educators should stand on a higher level, predict the development and future of data science, transformation and early consideration of university related professional teaching and research direction, as well as related curriculum adjustment. In this paper, the author puts forward the personal opinions and suggestions, which have some reference to the current university to carry out the relevant courses of data science.

Introduction

With the rapid development of Internet technology and media technology is becoming more and more popular, the vocabulary meaning of the big data has long been known to every family, young and old well-known. By the end of 2014, with the United States IBM company and the Chinese University cooperation as an opportunity, in the Chinese universities, big data technology teaching and research work, has been favorable support and entered the rapid development of the track.[1] Although since then, there are still differences ideas about the teaching method, the teaching content, teaching object, teaching aims, teaching achievements inspection standard and inspection method of specific work for big data courses, but the university teaching and scientific research achievements are the huge, and related to big data teaching, this has been recognized. The reform of teaching in practical teaching is undoubtedly the right direction. While the popularity of big data technology, it is bound to have a huge impact on the development of various disciplines and the application fields, but also for its own production of soil, computer science, to trigger its "fission" effect, that is Data Science has set up. It can be expected that computer science has bred a new branch of Science: Data Science. This is also a new thought in the scientific circles and educational circles.

The Meaning of Data Science Subjects

Data is now creating opportunities for business growth and profit like never before. In the last decade, the emergence of advanced data technologies and superior analytics tools has made it possible for business operators to reap numerous benefits from their data assets, yet for most they’ve only just scratched the surface of data’s potential. Data Science is allowing enterprise’s to successfully leverage that potential like never before. [2] In fact, this is due to the promotion and application of data analysis technology; it has produced such a result.
The people said, now we are in the era of big data, namely, the promotion and application of big data technology, has affected and is changing our life, work, learning, entertainment, family and even the future. So, what is the big data technology? I think it is based on computer and network technology, the use of cloud computing, a new method based on data analysis, for example, data mining and machine learning and intelligent technology, this are comprehensive research into interdisciplinary.

The courses content is involved in data analysis, this can be set up for college is a professional research direction, but also as a professional basic courses or other existing professional direction courses, or professional elective courses. At present, colleges and universities are being implemented and explored.

At a higher level, we believe that the study of data science covers statistics, computer science, mathematics, engineering, and related to other disciplines. In practical work, it is also more involved in computing, computing methods, program design, data visualization skills and knowledge in many fields. It is said that the data scientists need three basic skills: Mathematics and statistics, computer skills, knowledge of specific business areas. Perhaps, this is the most simple and clear expression.

**Data Science and Related Courses in the University**

2014 that year, South China University of Technology had been authorized and opened the Cloud Computing and Big Data professional, this professional settings, making this in Southern China area has a very high visibility of the University, of a more well-known at that time. In later two years, the Chinese Education Ministry approved the declare of Data Science and Big Data Analysis, this new professional, authorized to three universities, that are Peking University, Central South University and foreign economic and trade university. Another report is: there are eight universities opened the Cloud Computing and Data Science majors, and settled in the Ali Cloud University cooperation program AUCP, They are Beihang University, Zhejiang University, Fudan University, Shanghai Jiao Tong University, Xi'an Jiao Tong University, Nanjing University, Wuhan University, South China University of Technology. [3]

The fact that our universities set up Data Science and related specialty also shows that, at present in the Chinese scientific community, Data Science has a clear orientation in the classification of subjects.

**Influence of Data Science**

**Talent Market and Employment Prospects**

Recent survey shows that the talent market, the shortage of data science professionals, has become one of the important factors restricting the development of enterprises and institutions. High amount of wages may reflect the desire of enterprises and institutions of the shortage of talent. [4] "The diversification of employment" is a welcome phenomenon in China at present. This contains more scientific and technological content.
Very Necessary and Urgent to Reform the Teaching of Professional Courses in Colleges and Universities

The desire for technical personnel of enterprises and institutions forces colleges and universities to further adjust the professional teaching plan and curriculum arrangement according to the employment direction. Outdated teaching materials and teaching content will soon be eliminated. The new teaching content, such as data mining, machine learning, intelligent computing and intelligent technology, this originally belonging to the postgraduate course, will be classified in the undergraduate teaching program, and soon, like data structure, statistics, operational research and so on, will become the compulsory course in colleges and universities. You can imagine, with the national science and technology progress, these courses, will be in the near future, into the university general education, colleges and universities' General Education will take greater responsibility.

Electronic Commerce will Further Develop and Progress

November 11, 2016, China in recent years, there is a new shopping festival emergence. In this year, in the festival, Taobao sales announced: 120 billion 700 million. This is the best example. [5] This also indicates that the traditional marketing model will be faster recession, and only the transition to get new and development. Until now, only about 30 percent of businesses have experienced the Big Data revolution, but 2017 will certainly see a continued boost in Big Data investments, especially as the cost to handle the “volume, velocity and variety of data” has substantially come down. According to the Information Week, Big Data Analytics Sales Will Reach $187 Billion by 2019. [6]

Things Internet Market Potential is huge

According to the "General Electric Industrial Network Opinion Report", the Internet of Things market in the next 20 years, the global GDP contribution 10-15 trillion, from the data of scientific talent market popularity soared networking technology can also prove this point. IBM, Intel, Verizon and Microsoft are both in the broad strokes of data scientists who have the Internet of things technology. [7]

Summary

Data Science will patronize our future life, college and universities teachers should be aware of this, to comply with the historical trend, do their own work.

References