Big Data Analysis: Historical Insights and China’s Breakthroughs – Case Studies and Future Prospects

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In recent years, the development of big data models more and more rapidly, and everyone have forgotten the role of the most important part of the big data modeling —— the big data analytics. The importance of data analytics determines the basic level of accuracy of big data modeling. And this essay will introduce the role of big data analysis.

This essay is structured into three key sections.it begins with introduce what is the big data analytics and explain why we use big data analytics, followed by a macro history of big data analytics in the world and big data analytics about China, and concludes with the future of big data analysis. Then anecdotes will be interspersed throughout the essay.

What is big data analytics? "Big data analytics describes the process of uncovering trends, patterns, and correlations in large amounts of raw data to help make data-informed decisions. These processes use familiar statistical analysis techniques—like clustering and regression—and apply them to more extensive datasets with the help of newer tools. " This is the answer given by salesforce in tableau. Now we know what big data analytics, and why we use it? "Data is woven into the everyday fabric of our lives. With the rise of mobile, social media, and smart technologies associated with the Internet of Things (IoT), we now transmit more data than ever before—and at a dizzying speed. Thanks to big data analytics,

organizations can now use that information to rapidly improve the way they work, think, and provide value to their customers. With the assistance of tools and applications, big data can help you gain insights, optimize operations, and predict future outcomes. This ability to derive insights to inform better decision making is why big data is important. It's how a retailer might hone their targeted ad campaigns, or how a wholesaler might resolve bottlenecks in the supply chain. It's also how a health care provider might discover new options for clinical care based on patient data trends. Big data analytics enables a more holistic, data-driven approach to decision-making, in turn promoting growth, efficiency, and innovation." This is the answer given by Microsoft.

Most people think that big data analytics should be a technology that has emerged in last few decades, but it's really not. The earliest examples we have od humans storing and analyzing data are the tally sticks, which date back to 18,000 BCE! The Ishango Bone was discovered in 1960 in what is now known as Uganda and is thought to be one of the earliest pieces of evidence of prehistoric data storage. This may differ from the perceptions of most people, but humans did use data analysis technology as early as 18,000 years ago.

Big data in 20th century. The first data-processing machine appeared in 1943 and was developed by the British to decipher Nazi codes during World War II. This device, named Colossus, searched for patterns in intercepted messages at a rate of 5,000 characters per second, reducing the length of time the task took from weeks to merely hours. Then, in 1965 , the United States Government decided to build the first data centre to store over tax returns and sets of fingerprints. The project

was later dropped but is widely accepted as the beginning of the electronic data storage era. The internet age and the dawn of big data is coming, because the World Wide Web and developed HTML is created by Tim Berners-Lee and Robert Cailliau between 1989 and 1990.

The information age —— 21th century. Since the early 2000s,the internet and the Web has offered unique data collections and data analysis opportunities. With the expansion of web traffic and online stores, companies such as Yahoo, Amazon and eBay location data and search logs. This opened a whole new world of possibilities. Focus on China, the Baidu search have the more information compared to before, and "We can deal with hundreds of billions or trillions of data [points]," says Zhang Tong, the head of the Big Data Lab at Baidu, China's largest search engine. Big data technologies are often used alongside other high-tech innovations like cloud computing and artificial intelligence. Though the big data has blossomed only in the last decade, it is already being used in China in many aspects of life. For example, Baidu is using big data to track and project patterns n disease, which can help hospital administrators make vaccines or schedule staff. Tencent, the tech giant that runs China's largest mobile chat network, Wechat and QQ , are using social data to identify the trendsetters among groups of friends, and target marketing spending on those people. Alibaba , China's biggest ecommerce company , is using a wealth of financial information from its Taobao and Alipay programs to figure out which small businesses are worthy of a loan.

In addition to these macro-level advances and changes, what struck us more deeply was the improvement in our daily lives. The traffic prediction is more correct than before with the addition of big data analysis technology. The difference

between the time predicted by the previous map and the real one is huge, and it may be more than ten minutes apart. But now, the traffic signals' time changed accurate to seconds. This applied to autonomous driving for realize the optimal path planning that will reduce traffic congression and provide us with the best options to quickly reach our destination. Other sides, we can use this to visualize the tender of commodities' price and help us to decide when and on which platform to buy.

In the future , big data will also be useful and disruptive for companies outside of the tech sector.

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