Why big data matters more and more these day

Generally speaking, big data refers to large-scale data that is [1] difficult for raditional data management systems cannot store, process, and analyze them (Google Cloud, 2023). However, what is certain is big data will be widely applied in the future development of business model and help to make rational analysis, [2] considering its defining property of "3V", which is volume, velocity and variety respectively (Ben Lutkevich, 2023). In the follow part, I will detail how these qualities contribute to the importance of big data itself in technology, public safety and business world.

The appearance of ChatGPT along with large language model quickly told the world why Artificial Intelligence has become the most advanced technology field and is going to influence everyone in no far future. Yet those productive tools are not built up by a single month, while they need plenty of conducted data and selected information to be fed up and big data perfectly suits this requirement because most of them generated by business has significant amount and specific targets. In this process, [3] big data provides the raw material, the vast datasets, for AI to work its magic (Fabyio Villegas). Meanwhile, [4] the development of AI can also assist with in finding the trends, connection and other useful information that may be extremely hard for traditional decision makers of companies or government to detect (WIKI, 2024). In other world, big data makes it possible to manufacture efficient AI for different purpose, and correspondingly the mature language models are going to convert the big data as raw material into a kind of valuable asset because it leads business at forefront in advance.

In addition to those impressive fields such as cutting-edge technology, big data also plays a role in places that most people can not notice. Nowadays, the criminals in different areas is operating more quietly than any time in our history, government and police have realized it's not

enough to take action after a crime is committed and that why they start to apply [5] so-called "criminal analysis" to provide advanced warnings about emerging crime trends or patterns (Snowflake, 2023). According to Grant Woodward, Public Safety and Defence Specialist, SAS, *they're capturing and collecting more data than ever. In the last two years, we've created more data than in the history of mankind* and basically most of them are coming from the big data constituted by fragmented information we released every day on WeChat, Facebook and so on. By using related application, police can differenciate and recollect these information and estimate who has higher possibility to do harm to the society and prevent that on time.

Another example illustrating how government and society adopt big data to protect the lives of citizens is epidemic surveillance and containment. [6] By digging into information from big data, the prevention department can get the flow of people in certain area and take measures against people who may carry infectious diseases (Zengtao Jiao, 2023). Also, we should not ignore the imporantance of big data in the early warning of epidemic. [7] Early warning of epidemic is intrinsically data driven for all the time, and based on data collected from the real world, artificial intelligence methods have been successfully applied to estimate high-risk areas and outbreak periods. And with these functions coming from big data, government can not only prevent the ponderance in a controllable degree but also make resources allocated and utilized reasonably.

These examples above demonstrate why big data matters in our daily life, whereas there are still several obstacle facing in the application of big data. First, let's talk about privacy issue. [8] Since we are now almost living in a transparent society, people have expressed their worries if those big data including their individual information will be misused or even divulged by both companies and government. Meanwhile, some survey shows some website and application users do not really know when their information is taken and who stands in the back. Then, when it

comes to technique problem, most recognized that the way we manage unstructured data is not wisely enough and some improvements are been looking forward.

With all this being said, big data is a super powerful tool as we handle with business and public conditions. Although some is arguing and magnifing the disadvantage of using big data, it's undoubtable that we can no longer live without it in our future lives, and it is very likely to create greater wealth for human beings.

Refernece:

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