IJIAET International Journal of Innovative Analyses and Emerging Technology

| e-ISSN: 2792-4025 | http://openaccessjournals.eu | Volume: 2 Issue: 1

Big Data

Abduxoliqov Abdulaziz Ulug'bek o'g'li
"TEXNOPARK" LLC, IT-specialist

Abidova Feruza Shakirovna

Tashkent University of Information Technologies (TUIT), assistant of IT department

Abstract: This article provides information about the origin of the term Big date, its terms, technological developments in recent years and its consequences.

Keywords: technology, telecommunications, data, information retrieval, Big Data.

Big data is a term used to refer to large amounts of data (usually terabytes, exabytes, and petabytes). It should be possible to collect, distribute, modify, analyze, store and visualize this information using existing and emerging technologies. The rapid growth of data is due to technological advances in recent years and the resulting increase in machine-generated data. These include the widespread use of RFID technology, the widespread use of electronic transactions in finance, the results of research institutions, the spread of web technologies, protocols in telecommunications systems. Although Big Data has already existed in research-related fields, it is only in recent years that this phenomenon has become more common. This is due to the fact that the analysis of large amounts of data is now widely used by economic organizations, and as a result, data analysis has become a key issue in such important issues as increasing competitiveness and efficiency. In addition to creating additional responsibilities and requirements for the Chief Data Officer (CIO), Big Data is also responsible for the emergence of new professions such as Data Steward and Data Scientist. brought.

The term big data was born in 2008. Clifford Lynch, editor of the journal Nature, used the term big data in a special issue dedicated to the very rapid growth of global data. But big data has been there before. According to experts, streams that receive more than 100 gb of data per day are called big data.

Analyzing big data helps to identify patterns that are beyond the scope of human perception. This will allow us to further improve all areas of our daily lives, government, medicine, telecommunications, finance, transport, manufacturing and others, to increase their capacity, to find alternative solutions to problems.

According to experts, the term "Big Data" refers to streams that receive more than 100 gb of data per day. Later, with the rapid increase in information, the concept became more widespread. The term is commonly used to refer to large amounts of data (terabytes, exabytes, and petabytes).

The term weighty information first appeared in the press in 2008, when Clifford Lynch, editor-in-chief of Nature magazine, published an article in his journal on the development of the future of science using large-scale data processing technologies. Until 2009, the term was approached only from the point of view of scientific analysis, but after the publication of several more articles on the subject in the press, the concept of "Big Data" began to be widely used.

The term weighted data refers to a large amount of data stored on virtually any medium. Also, this amount is so large that it cannot be processed using conventional software or hardware, and in some cases it is not possible at all.

Big Data is not only the data itself, but also the technology of its processing and use, the way to search for the necessary information in a very large flow.

ISSN 2792-4025 (online), Published under Volume: 2 Issue: 1 in January-2022

Principles of dealing with weighted information - "Volume", "Velocity", "Variety" are closely related to this term. It is a process that directly depends on the amount of information stored, the speed of processing and the diversity. Recently, another concept has been added to these three basic principles - the concept of "Value", which means the value of information. That is, it must be theoretically or practically useful and necessary to justify the cost of storing and processing the data.

For example, a simple source of big data can include social networks - each profile or public page represents a small drop in the ocean of information. Regardless of the amount of data stored in this or that profile, the interaction of each user should be as fast as possible.

Significant information is collected in almost every area of human life. This can include any network of human activities. This includes both social media, medicine, and banking, as well as the system of devices, the results of a large amount of information received on a daily basis, such as astronomical observations, metrological data, and metrological information from Earth exploration devices. and information can be.

In real time, information from various monitoring systems is provided to the servers of this or that company. Television and radio broadcasts, the database of calls from mobile operators - with which each specific person interacts to a minimum, but all this information in general becomes significant information.

Significant information technology is inseparable from research and business. They have also begun to take over public administration - there is a need to introduce more efficient storage systems everywhere and to manipulate information.

The problem with weighted data is that the various pieces of information that have been collected over the decades are still very important and open to any system. Another big problem is the cost of processing them. This includes the cost of expensive equipment and the salaries of skilled professionals who handle large amounts of information. Obviously, the equipment needs to be updated regularly so that it does not lose its efficiency as the data volume increases.

The third problem is the large amount of information that needs to be processed. For example, studies yield results not in 2-3 times, but in a large number of studies, because it is very difficult to separate the data from the general flow and make an objective assessment in order to have a real impact on an event.

Data loss problem. Precautions should not be limited to simple one-time backups, but at least 2-3 backups. However, the increase in volume further complicates the backup - IT professionals are trying to find the optimal solution to this problem.

The bottom line is that we can't hide from technology. Big Data is changing the world, slowly entering our city, our home and our gadgets.

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ISSN 2792-4025 (online), Published under Volume: 2 Issue: 1 in January-2022