

# Chapter 2

## A Walk Through the World of Data Analytics

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### ABSTRACT

*Data analytics is used to extract necessary information from a given data or data set. It is a concept of technology which can be implemented in various applications and is evolving rapidly. Data analytics analyses the whole data set completely and provides important information from it to the users. In this chapter, a brief description of data analytics is provided. Different types of data analytics are also explained. Along with it, various different aspects of data analytics are described. As the chapter title suggests, this chapter is a brief walk through the world of data analytics i.e., a brief insight of data analytics is provided in this chapter.*

### WHAT IS DATA ANALYTICS?

Data analytics basically means examining and analyzing data with some specific tools and algorithms. An extremely huge amount of data can be easily examined and analyzed with the help of data analytics. The thing about data analytics which makes it useful is that, it provides a person with crucial information regarding the data. It can put before a person all the important details of the whole data, irrespective of how large the data is.

According to author Acharjya (2017), in digital world, data is generated from various sources and the fast transition from digital technologies has led to growth of big data. Data analytics is doing the task of simplifying an otherwise tedious and time consuming process of analyzing and obtaining information from any given data. The tools used in data analytics are capable enough of analyzing the data thoroughly.

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## **HISTORY AND EVOLUTION OF DATA ANALYTICS**

Data analytics has gained immense limelight in the recent past. It truly owes this due to the list of benefits it provides. It generates a lot of curiosity regarding its origin, its history. There is no such one particular place of its origin or no particular date that marks its origination day. It is a technological concept that has been around since a very long time. The basic meaning of data analytics is to analyze data and provide information regarding it. So, this work of analyzing data to gain information from it is being carried out since many years. Even before the term data analytics was coined and people came across this term, its concept was being used in the simplest of form. Now whenever anyone wants to apply data analytics and obtain information, they make use of some or the other data analytics tools like R programming, Python, etc. These tools were not always present, despite of that, data analytics would be performed manually. Analyzing data, especially large amount of data manually without any tool obviously means a very time consuming process and it also includes a possibility that some important information which would have been easily obtained through data analytics tools might get missed out while manually performing data analytics. Having said that, matter of fact remains the same that data analytics tools were not existent always. Nevertheless, data analytics was widely used by many people even before coining of the term data analytics and its formal introduction to the world, the only differences were the analysis had separate special term for it and no tools existed. In fact, there were no virtual or online data storage facilities as well, many years back then. Book ledger, diary, etc. form of writing, maintaining and storing data were used. Different industries are present since many years and different businesses are also carried out since many years, it is not something which is started in the recent times. If the first industrial revolution is to be considered, then it took place somewhere in between the year 1760 to 1840. This itself is proof enough of the existence of the different industries and the ongoing of different kinds of business. When there is work been done, there is undoubtedly a lot of data generated and not just in business sector, a lot of data is generated in various sectors which requires analysis. So like explained earlier, a basic manual analysis was always being performed by people which is necessary to handle and manage the work. Only with progress and invention of devices like computer, different programming tools, etc. data analytics concept evolved gained this term and limelight.

## **WORKING OF DATA ANALYTICS**

The working of data analytics is a simple process. It involves six different steps. Collecting the data is the first step, then the data needs to be categorized. After that the data needs to be arranged, filtered, analyzed and only after all these steps the data is provided to the end user which is the final step in the working of data analytics. The six different steps involved in working are as follows:

1. **Collecting the data:**  
Firstly, the data needs to be collected and put together. Whichever data is to be analyzed, it needs to be collected completely and brought and put together.
2. **Categorizing the data:**  
All the collected data needs to be set up in properly and be categorized appropriately.

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