Chapter 15
Data Analysis on Global Stratification

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ABSTRACT

This chapter will guide you through the modeling, uses, and trends in data analysis and data science. The authors focus on the importance of pictorial data in replacement of numeric data. In most situations, graphical representation of data can present the information more distinctly, informative, and in less space than the same information requires in sentence form. This chapter provides a brief knowledge about representing data to more understandable form such that any person whether layman or not can understand it without any difficulty. This chapter also deals with the software Tableau which we use to convert the table data into graphical data. This Chapter contains 11 heat maps related to the world economies and their detailed study on several different topics. It will also give light on the basics of Python Language and its various algorithm studies to compare all the world economies based on their development.

INTRODUCTION

In old times, with lower population and low invention in technologies, humans did not have much idea about data and its uses. They don't keep it safely, does not understand its need and importance. Unknowingly, they share it with other peoples and their relatives. But as soon as technology grown, people

understand its importance. With the increase in technology and intelligence, people start collecting the data and try to keep it safely. As per the increase in the volume of the data with change in time, there is an emerging need for the professionals working in the field, sorting the data, analysing it and drawing out various trends from it. By the use of results from the analysis, different predictions are done and different measures are being taken in order to have the best possible solution. The various advantages of data analysis and data science are being studied in the following chapter. In this chapter, we are going to give an example of Global Stratification, which will be going to base on different measures. We will be learning about different data collection techniques from various resources present online. Then we will be briefing about the software that we are going to use in order to visualize the data collected by us. We will be doing this for making it easier for the layman to understand in his or her language. The chapter focuses on the topics like: Health, Political Freedom, Public Sector, Work and Life, Violence Rights, Energy Issues, etc. The countries will be classified on these factors and its result will be used to categorize them in different categories.

DATA ANALYSIS: AN INTRODUCTION

The data analysis takes place when event is repeated over a period to many numbers of times. It can be detected statistically or graphically. The data can be of many forms and can be collected from various sources such as survey on internet, previous records of associated data to be analysed. The data which have been collected are known as raw data. The requirement of data analysis is that to predict the possibility for future of an event. For example- Let a day be selected for predicting the possibility of rain, to predict the possibility by analysing the whole record of rain for that day and by making algorithm, the probability of the rain for that day will be resulted. This is how the prediction occurs. The data analysis is using widely by the different websites and also in different fields. The data analysis is used in different fields such as education, weather, business intelligence, construction, digital marketing, risk analysis, software analysis etc. The data analysis is also done by cleaning and modelling of the data and helps in supporting to the resulted data. The data refining is one of the main procedures for data analysis. The raw data should be appropriate for data analysis (Said & Torra, 2019).

History

Herman Hollerith invented Tabulating Machine in 1890. This machine was based on punch cards. The data scientist came in need when data was gathering in large amount and handling the data became difficult. The data handling was also a part of data analysis. The data analysis has given many benefits such as to manage and store the data and to use that data for the prediction of an event. It was important to use that data that was stored in machine because it helped to understand and improve the business processes and economic growth for a country and saved the time and money. Every company got the benefit. Before analysis the data it is necessary that for whom and for which purpose the analysis is going to be conducting. That became the main step of data analysis which helps the people to make decisions. Historical analytics is also a term which defines the analysis of an activity and the data from the past to recognize the patterns, correlations and other statistical relationships. Business Evolution was the main reason to build a field of data analysis (Miyazaki, M. 2015).

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