Case Study: To Study Data Analytics Technology, its Needs and Application in various Domains.

What is Data Analytics?

The term data analytics refers to the process of examining datasets to draw conclusions about the information they contain. Data analytic techniques enable you to take raw data and uncover patterns to extract valuable insights from it.

Need of Data Analytics:

We all know that data is all around us and everything that we do results in new data. Every kind of electronic message, which we either receive or send like withdrawing money from a bank, every website that we visit contributes to the storage of data. In today's world data is incredibly valuable and highly incalculable.

Data is increasing at a rapid speed and the rate of growth of information is very high. Data generation occurs through many users, industries, and businesses. It is crucial to amalgamate this data that have been generated through the business. If it gets wasted, lots of valuable information will be lost.

And as the workplace becomes more tech-driven and fast-paced, data analysis has become important for every business.

Data analysis helps an organization to tackle the data and utilize it to find new opportunities. This leads to more smart business moves, higher profits, efficient operations, and happy customers. The idea is to share the business prospects in a better way in the future and to use it with analytics concept. Data analysis involves extraction of trends, patterns and useful information from a set of existing data which will be of no use if not analyzed. It is a kind of business intelligence that is now used for gaining profits and making better use of resources. This can also help in improving managerial operations and leverage organizations to next level.

Application of Data Analytics:

1. Security

Data analytics applications or, more specifically, predictive analysis has also helped in dropping crime rates in certain areas. In a few major cities like Los Angeles and Chicago, historical and geographical data has been used to isolate specific areas where crime rates could surge. On that basis, while arrests could not be made on a whim, police patrols could be increased. Thus, using applications of data analytics, crime rates dropped in these areas.

2. Transportation

Data analytics can be used to revolutionize transportation. It can be used especially in areas where you need to transport a large number of people to a specific area and require seamless transportation. This data analytical technique was applied in the London Olympics a few years ago.

For this event, around 18 million journeys had to be made. So, the train operators and TFL were able to use data from similar events, predict the number of people who would travel, and then ensure that the transportation was kept smooth.

3. Risk detection

One of the first data analytics applications may have been in the discovery of fraud. Many organizations were struggling under debt, and they wanted a solution to this problem. They already had enough customer data in their hands, and so, they applied data analytics. They used ‘divide and conquer’ policy with the data, analyzing recent expenditure, profiles, and any other important information to understand any probability of a customer defaulting. Eventually, it led to lower risks and fraud.

4. Risk Management

Risk management is an essential aspect in the world of insurance. While a person is being insured, there is a lot of data analytics that goes on during the process. The risk involved while insuring the person is based on several data like actuarial data and claims data, and the analysis of them helps insurance companies to realize the risk.

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Underwriters generally do this evaluation, but with the advent of data analysis, analytical software can be used to detect risky claims and push such claims before the authorities for further analysis.

5. Delivery

Several top logistic companies like DHL and FedEx are using data analysis to examine collected data and improve their overall efficiency. Using data analytics applications, the companies were able to find the best shipping routes, delivery time, as well as the most cost-efficient transport means. Using GPS and accumulating data from the GPS gives them a huge advantage in data analytics.