**WHAT IS DATA ANALYTICS?**

Data analytics is **the process of analyzing raw data in order to draw out meaningful, actionable insights**, which are then used to inform and drive smart business decisions.

A data analyst will extract raw data, organize it, and then analyze it, transforming it from incomprehensible numbers into coherent, intelligible information. Having interpreted the data, the data analyst will then pass on their findings in the form of suggestions or recommendations about what the company’s next steps should be.

You can think of data analytics as a form of business intelligence, used to solve specific problems and challenges within an organization. It’s all about finding patterns in a dataset which can tell you something useful and relevant about a particular area of the business—how certain customer groups behave, for example, or how employees engage with a particular tool.

Data analytics helps you to make sense of the past and to predict future trends and behaviors; rather than basing your decisions and strategies on guesswork, you’re making informed choices based on what the data is telling you.

Types Of Analysis

Descriptive analytics helps answer questions about what happened. These techniques summarize large datasets to describe outcomes to stakeholders. By developing key performance indicators (KPIs,) these strategies can help track successes or failures. Metrics such as return on investment (ROI) are used in many industries. Specialized metrics are developed to track performance in specific industries. This process requires the collection of relevant data, processing of the data, data analysis and data visualization. This process provides essential insight into past performance.

• Diagnostic analytics helps answer questions about why things happened. These techniques supplement more basic descriptive analytics. They take the findings from descriptive analytics and dig deeper to find the cause. The performance indicators are further investigated to discover why they got better or worse. This generally occurs in three steps:

• Identify anomalies in the data. These may be unexpected changes in a metric or a particular market.

• Data that is related to these anomalies is collected.

• Statistical techniques are used to find relationships and trends that explain these anomalies.

• Predictive analytics helps answer questions about what will happen in the future. These techniques use historical data to identify trends and determine if they are likely to recur. Predictive analytical tools provide valuable insight into what may happen in the future and its techniques include a variety of statistical and machine learning techniques, such as: neural networks, decision trees, and regression.

• Prescriptive analytics helps answer questions about what should be done. By using insights from predictive analytics, data-driven decisions can be made. This allows businesses to make informed decisions in the face of uncertainty. Prescriptive analytics techniques rely on machine learning strategies that can find patterns in large datasets.

**Data analytics case study: Netflix**

Another real-world example of data analytics in action is one you’re probably already familiar with: the personalized viewing recommendations provided by Netflix. So how does Netflix make these recommendations, and what impact does this feature have on the success of the business?

As you might have guessed, it all starts with data collection. Netflix collects all kinds of data from its 163 million global subscribers—including what users watch and when, what device they use, whether they pause a show and resume it, how they rate certain content, and exactly what they search for when looking for something new to watch.

With the help of data analytics, Netflix are then able to connect all of these individual data points to create a detailed viewing profile for each user. Based on key trends and patterns within each user’s viewing behavior, the recommendation algorithm makes personalized (and pretty spot-on) suggestions as to what the user might like to watch next.

This kind of personalized service has a major impact on the user experience; according to Netflix, [**over 75% of viewer activity**](https://www.wired.co.uk/article/how-do-netflixs-algorithms-work-machine-learning-helps-to-predict-what-viewers-will-like) is based on personalized recommendations. This powerful use of data analytics also contributes significantly to the success of the business; if you look at their [**revenue and usage statistics**](https://www.businessofapps.com/data/netflix-statistics/), you’ll see that Netflix consistently dominates the global streaming market—and that they’re growing year upon year.

As you can see from these two case studies alone, data analytics can be extremely powerful. For more real-world case studies, check out [**these five examples of how brands are using data analytics**](https://www.mentionlytics.com/blog/5-real-world-examples-of-how-brands-are-using-big-data-analytics/)—including how Coca Cola uses data analytics to drive customer retention, and how PepsiCo uses their huge volumes of data to ensure efficient supply chain management.

**ROLES IN DATA ANALYSIS**

**TOOLS IN DATA ANALYSIS**

### Why is data analytics important?

Data analytics is crucial for businesses today, as it enables them to transform raw data into actionable insights that drive informed decision-making, optimize operations, gain a competitive edge, and enhance customer experience.