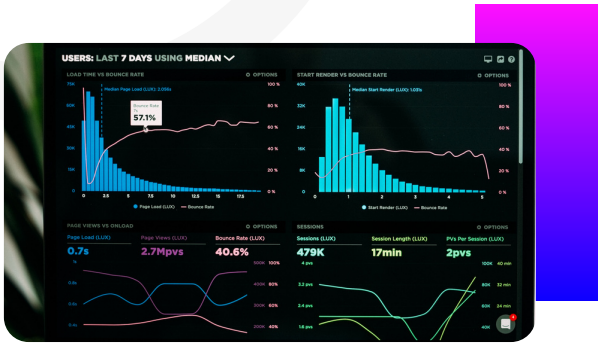
DIFFERENCES BETWEEN DATA ANALYTICS, BUSINESS INTELLIGENCE AND DATA SCIENCE



Although Data Analytics and Business Intelligence are related to data and information, the two methods are distinct. They work separately and serve different purposes, but both have a significant influence on modern knowledge-driven businesses, which means that organisations should bring them together so that they can take advantage of the full capabilities and skills of each.

Data Analytics aims to convert raw and unstructured data into a data format that is clearly understandable to the user. Various business operations, such as data modelling, data transformation and data cleansing, are the main trends in the implementation of data analytics in an organisation.

The implementation of Data Analytics usually occurs in companies that are fairly new and require changes in their business model. Data Analytics help business users to analyse historical and current data, thus predicting future trends and changing the proposed business model for the better.

Business Intelligence, on the other hand, is used to improve decision-making, perform data mining tasks, analyse business information, create reports, and improve operational capabilities.
However, it is important to note that Business Intelligence is also used to store historical data and has a significant impact on business performance management and data management.
BI is applied in situations where the company does not have to alter its current business model and its sole objective is to meet the organisation's goals. Business Intelligence helps users to discover where the gaps in data management are and to solve them by providing effective scenarios for decision-making.

Data Science, on the other hand, is a multidisciplinary field focused on finding actionable information from large sets of raw and structured data. It focuses primarily on discovering answers to things we don't know. Data scientists use a variety of techniques to obtain answers, incorporating computer science, predictive analytics, statistics, and machine learning to analyse massive datasets in an effort to establish solutions to problems that have not yet been asked.

The primary goal of data scientists is to formulate questions and locate possible avenues of study, with less concern for specific answers and more emphasis on finding the right question. Experts do this by predicting possible trends, exploring disparate and unconnected data sources, and finding better ways to analyse information.

Business Intelligence is simpler, while data science is more complex. BI is about dashboards, data management, data organisation and producing information from data. Data science, on the other hand, is about using statistics and complex tools on data to predict or analyse what might happen.

Data Science could be seen as a BI evolution, but as a complex set of models, aplications of statistics and study cases.

Data Analytics could be considered a reduced version of Data Science, something similar to a concrete application, focused on a defined objective that we know beforehand, or that we hardly know anything about, but we know it is there.

The Data Scientist asks questions and extracts information from various sources, while Data Analytics, on the other hand, is in charge of answering these questions and only looks at one source.