Data science is an essential part of many industries today, given the massive amounts of data that are produced, and is one of the most debated topics in IT circles. Its popularity has grown over the years, and companies have started implementing data science techniques to grow their business and increase customer satisfaction.

Data science is the domain of study that deals with vast volumes of data using modern tools and techniques to find unseen patterns derive meaningful information and make business decisions. Data science uses complex machine learning algorithms to build predictive models .The data used for analysis can come from many different sources and presented in various formats .Now that you know what data science is, let’s see why data science is essential to today’s IT landscape.

It may be easy to confuse the terms “data science” and “business intelligence” (BI) because they both relate to an organization’s data and analysis of that data, but they do differ in focus. Business intelligence (BI) is typically an umbrella term for the technology that enables data preparation, data mining, data management, and data visualization. Business intelligence tools and processes allow end users to identify actionable information from raw data, facilitating data-driven decision-making within organizations across various industries. While data science tools overlap in much of this regard, business intelligence focuses more on data from the past, and the insights from BI tools are more descriptive in nature. It uses data to understand what happened before to inform a course of action. BI is geared toward static (unchanging) data that is usually structured. While data science uses descriptive data, it typically utilizes it to determine predictive variables, which are then used to categorize data or to make forecasts,

Data scientists also gain proficiency in using big data processing platforms, such as Apache Spark, the open source framework Apache Hadoop, and NoSQL databases. They are also skilled with a wide range of data visualization tools, including simple graphics tools included with business presentation and spreadsheet applications (like Microsoft Excel), built-for-purpose commercial visualization tools like Tableau and IBM Cognos, and open source tools like D3.js (a JavaScript library for creating interactive data visualizations) and RAW Graphs. For building machine learning models, data scientists frequently turn to several frameworks like PyTorch, TensorFlow, MXNet, and Spark MLib.