Modern Data Ecosystem and the Role of Data Analytics

**Key players in the Data Ecosystem**:

**Data engineering** converts raw data into usable data. **Data analytics** uses this data to generate insights. **Data scientists** use data analytics and data engineering to predict the future using data from the past, **business analysts** and business intelligence analysts use these insights and predictions to drive decisions that benefit and grow their business.

Data Scientist:

Data scientists analyze data for actionable insights and build machine learning or deep learning models that train on past data to create predictive models. Data scientists are people who answer questions such as, how many new social media followers am I likely to get next month, or what percentage of my customers am I likely to lose to competition in the next quarter, or is this financial transaction unusual for this customer? Data scientists require knowledge of mathematics, statistics, and a fair understanding of programming languages, databases, and building data models. They also need to have domain knowledge.

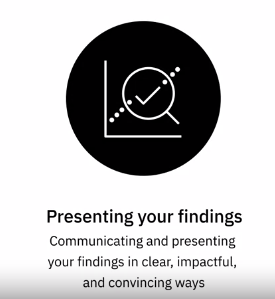
Data Analysis:

Data analysis is the process of gathering, cleaning, analyzing and mining data, interpreting results, and reporting the findings. With data analysis we find patterns within data and correlations between different data points. And it is through these patterns and correlations that insights are generated, and conclusions are drawn. Data analysis helps businesses understand their past performance and informs their decision-making for future actions. Using data analysis, businesses can validate a course of action before committing to it. Saving valuable time and resources and also ensuring greater success.

The Data Analysis Process:







Data Analytics:

Data analytics as a process or a phenomenon of taking information gathered from a relevant population, maybe our customers or our social audience, and breaking that information down into subsets, and using that data to make decisions about products or services that we want to offer, or in cases of the digital environment that we're in, making decisions about certain pieces of content that we want to publish so that it appeals to our target audience.

**Descriptive Analytics,** that helps decode “What happened.”

**Diagnostic Analytics**, that helps us understand “Why it happened.”

**Predictive Analytics**, that analyzes historical data and trends to suggest “What will happen next.”

**Prescriptive Analytics**, that prescribes “What should be done next.”