**Statistics & Data**

Statistics is a branch of mathematics concerned with the presentation, description, analysis, and collection of data. Before delving into statistics, it’s essential to understand what data is. In the past, major companies around the world viewed data as the “new oil,” but today, we recognize that data is more akin to soil. This means that data is the foundation of everything within an organization.

**Types of Data from a Data Science Perspective:**

* **Qualitative Data**
* **Quantitative Data**

**Qualitative Data:** Qualitative data, also known as categorical data, are divided into two types:

* **Ordinal Data**
* **Nominal Data**

**Ordinal Data:** Ordinal data is a type of data where there is a hierarchy or priority among the values. For example, in sales data, we might have categories such as “low,” “medium,” and “high.” We can assign mathematical grades to these categories, such as “1” for low, “2” for medium, and “3” for high.

**Nominal Data:** Nominal data do not have an inherent order. Examples include blood type, field of study, city name, state name, and the type or color of a car. Additionally, there is a type of data called Boolean, which is sometimes categorized separately but can also be merged with nominal data.

**Quantitative Data:** Quantitative data is a type of data that prioritizes numbers and logical values, and is divided into two categories:

* **Continuous Data**
* **Discrete Data**

**Continuous Data:** Continuous data include measurements like weight, height, car speed, etc. As you can see, there is a continuous order between the values.

**Discrete Data:** Discrete data refer to countable items, such as the number of employees in a company. There is no inherent order between these types of data.