

Lesson 0: Introduction

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Brief: In this introduction we will cover what statistics actually is, why it is important and where it is used.

Let's start with the question: What is statistics?

Statistics deals with data collection, analysis and organisation. Statistics can be considered as the "art" of data as it allows you to infer data and make models of that data. Statistics borrows tools from other fields of mathematics such as Calculus and Probability theory.

Statistics comes under many topics such as:

- Inferential statistics
- Descriptive statistics
- Multinarrative statistics
- Statistical analysis
- Statistical Learning theory

Statistics has many uses. It is multi-disciplinary, meaning it is not dedicated to just one specific fields. It has uses in Computer Science (Cryptography and Machine Learning), Biology(Bio-statistics), Statistical Mechanics/Thermodynamics, Business, Finance and many other fields! As you can see it is pretty important and used everywhere data is found.

Statistics is important because it allows us to understand complex data sets in more visual and intuitive ways. With the power of statistics, we can query data sets to get the information we need, check for any errors in the data set and make predictions based on the data and make graphs/charts based on that data.