

Module 1 - ***Basics of Data and Society***

In Basics of Data, we go over some math concepts relating to statistics that are used to represent data. With this statistical analysis we can represent the data visually in many different formats. We can also predict data trends and expect to a certain degree of accuracy what will happen. Data also has a large impact on society and if we can manage that data, we can transform society.

Module 2 – ***Simple Data Summarizations***

Data Summarizations talks about some very interesting data distributions concepts such as the law of large numbers, variance, and margin of error. These concepts are used day to day in the products we use and consume and is an important factor in marketing. We will understand the math behind these concepts and how companies' market to use with this data.

Module 3 – ***Simple Visualization and Data Interpretations***

For simple data visualization we discussed how to represent data in a way that it is easy for the reader to interpret and understand. Different ways to represent data with heat graphs, pie charts, histograms etc. We also talk about data that is misleading meant to push a certain narration to benefit a certain idea while disregarding the true narrative of the data. We also discuss regressions and time series.

Module 4 – ***Fallacies in Data Explorations***

In this module we cover a very important data aggregation technique called clustering. We discuss outliers which show that not all data is created equally. Furthermore, we compare association and causation. Large data repositories are also discussed. These are public repositories with vast amounts of data.

Module 5 – ***Ethics, Privacy and Security Issues with Data***

Here we talk about how data is invaluable. We are responsible for our own data and how it is managed is of utmost importance. The implications of data mismanagement can be devastating, Such as identity theft and financial liability.

Module 6 – *Narrative and Communications with Data*

We discuss a very important topic, global warming and see if it is a fact or fallacy. This concludes that sometimes data can be manipulated into what the storyteller wants to narrate, either by taking a small section of the data or the complete dataset.