

Lecture Summary: Jan. 9, 2023

- Introduction

Statistics is nowadays often called data science, or at least considered a very important part of data science.

Two important features of statistical data science:

- Statistics care more about “doing things right”. For example, are the samples representative of the population? Is there a bias in the data collection? Is the data analysis done appropriately in the sense that there is theoretical guarantee?

- Measures of uncertainty: This is a defining characteristic of statistics. How much uncertainty there is in the statistical analysis results due to different samples (data collection)? In other words, how much can the results change, and what is the chance for this much change? For example, how much can one trust a poll result prior to the U. S. Presidential Election?