

# Data Science & Algorithms

Sixtus Dakurah



# Inferential Statistics

# Getting Past the Jargons

Statistical Inference - What is it?

- 
- ```
graph LR; A[Statistical Inference - What is it?] --> B((1. A Discipline  
2. Use Methods, Procedures & Theorems  
3. Make Sense of Data)); B --> C[1. An Estimate  
2. A Confidence Interval  
3. Possible Rejection of a Hypothesis  
4. Classification or Clustering of Data Points];
```
1. A Discipline
  2. Use Methods, Procedures & Theorems
  3. Make Sense of Data

1. An Estimate
2. A Confidence Interval
3. Possible Rejection of a Hypothesis
4. Classification or Clustering of Data Points

2

## Basic Probability Terms

What is probability?



Concerned with the outcome of an experiment/observation/trial

## Common Terms Associated with Probability

Sample Space

Event

Entropy



[https://en.wikipedia.org/wiki/Entropy\\_%28information\\_theory%29](https://en.wikipedia.org/wiki/Entropy_%28information_theory%29)

3

## More Terms & Definitions

Types of  
Data

```
graph LR; A[Types of Data] --- B[Quantitative]; A --- C[Qualitative]; D[Errors] --- E[Random]; D --- F[Systematic]
```

Quantitative

Qualitative

Errors

Random

Systematic



# Introduction to Python