

TABLE OF CONTENTS

1: What is Probability?

- 1.1: Sample Spaces and Events
- 1.2: Probability Measures

2: Computing Probabilities

- 2.1: Equally Likely Outcomes and Counting Techniques (Combinatorics)
- 2.2: Conditional Probability and Bayes' Rule
- 2.3: Independent Events

3: Discrete Random Variables

- 3.1: Introduction to Random Variables
- 3.2: Probability Mass Functions (PMFs) and Cumulative Distribution Functions (CDFs) for Discrete Random Variables
- 3.3: Bernoulli and Binomial Distributions
- 3.4: Hypergeometric, Geometric, and Negative Binomial Distributions
- 3.5: Poisson Distribution
- 3.6: Expected Value of Discrete Random Variables
- 3.7: Variance of Discrete Random Variables
- 3.8: Moment-Generating Functions (MGFs) for Discrete Random Variables

4: Continuous Random Variables

- 4.1: Probability Density Functions (PDFs) and Cumulative Distribution Functions (CDFs) for Continuous Random Variables
- 4.2: Expected Value and Variance of Continuous Random Variables
- 4.3: Uniform Distributions
- 4.4: Normal Distributions
- 4.5: Exponential and Gamma Distributions
- 4.6: Weibull Distributions
- 4.7: Chi-Squared Distributions
- 4.8: Beta Distributions

5: Probability Distributions for Combinations of Random Variables

- 5.1: Joint Distributions of Discrete Random Variables
- 5.2: Joint Distributions of Continuous Random Variables
- 5.3: Conditional Probability Distributions
- 5.4: Finding Distributions of Functions of Continuous Random Variables
- 5.5: Sample Mean

Licensing

Index

Glossary

Detailed Licensing