

Statistics and Probability using Excel

Duration: 8 hours

Course Overview:

- Learn the concepts of Probability and statistics required for making business decisions
- Learn important probability distributions such as Normal distribution, Poisson distribution, Exponential distribution, Binomial distribution etc
- Conceptual and practical understanding of a Confidence Interval
- Understand the z-statistic and the t-statistic
- Learn how to perform Single Tail and Two Tail Hypothesis Tests
- Understand the logic of Hypothesis Testing

Target Audience:

- Anyone curious to master Probability and Statistics using Excel in a short span of time
- Business Analysts/ Managers who want to expand on the current set of skills

Module 1: Introduction

- Introduction
- Create resource

Module 2: Introduction to probability

- Milestone
- Module introduction
- Basics of probability
- Excel Basics
- Calculating Probability in Excel - Part 1
- Calculating Probability in Excel - Part 2
- Important laws of probability
- Implementing laws of probability in Excel

Module 3: Probability distribution concepts

- Concepts of probability distribution
- Measures of probability distribution in Excel
- Discrete vs continuous probability distribution
- Using probability distribution
- Google Search Settings
- Google Search Tools
- Search in Google by Image
- Google Search Mobile and Tablet App

Module 4: Types of discrete probability distribution

- Discrete Uniform probability distribution
- Discrete binomial probability distribution
- Binomial - Practical session
- Discrete Poisson probability distribution
- Poisson - Practical session

Module 5: Types of continuous probability distribution

- Continuous probability distribution - Introduction
- Uniform continuous probability distribution
- Normal distribution
- Normal distribution - Practical session
- Exponential distribution
- Exponential distribution - Practical session

Module 6: Statistical Inference

- Module Introduction
- Sampling and Types of Sampling
- Point Estimation
- Excel - How to do random sampling
- Excel - Point Estimation
- Sampling Distributions
- Excel - Demo of key results
- Interval Estimation
- Excel - Interval Estimation for mean
- Excel - Interval Estimation for proportion
- How to determine sample size?
- Sample case study

Module 7: Hypothesis Testing

- What is hypothesis testing?
- Type 1 and Type 2 errors
- The process of hypothesis testing Part-1
- The process of hypothesis testing Part-2
- How to find the p-value?
- Excel - Statistical Formulas for T distribution
- Excel - Statistical Formulas for Z distribution
- Vaccination case study
- Exercise problem

Module 8: Congratulations & about your certificate

- The final milestone!
- Bonus Lecture

