Statistics for Business Analytics using MS Excel

Duration:2 days

Objective:

This 2 days course will help you to understand Probability and Statistics requirements to creating business decisions. It will cover all the essential Excel formulas required for Business Analysis.

Audience

- Anyone curious to master Excel for Business Analysis in a short span of time.
- Business Analysts/ Managers who want to expand on the current set of skills.

Module 1: Introduction

- Introduction regarding the course
- Course resources

Module 2: Excel for Data Analytics

- Milestone
- Basic Formula Operations
- Mathematical formulas
- Textual formulas
- Logical formulas
- Date-Time formulas
- Lookup formulas
- Data tools
- Pivot tables

Module 3: Introduction to probability

- Probability module – Introduction
- Basic of probability
- Calculating Probability in Excel
- Important Laws of Probability
- Implementing Laws of probability in Excel

Module 4: Probability distribution concepts

- Concepts of probability distribution
- Measures of probability distribution in Excel
- Discreet Vs Continuous probability distribution
- Using probability distribution

Module 5: Types of discreet probability distribution

- Discreet Uniform probability distribution
- Discreet binomial probability distribution

- Binomial – Practical session
- Discreet Poisson probability distribution
- Poisson – Practical session

Module 6: Types of continuous probability distribution

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

Module 7: Statistics 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 8: 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
- Ecommerce site case study

Module 9: Optimizing business models

- Introduction
- Goal-seek and Scenario Manager in Excel
- Solver in Excel
- Different Solving methods of Excel Solver
- Solving a Transportation problem
- Price Skimming
- Excel - Price Skimming model
- Concept of Customer lifetime Value

- Excel - Calculating customer lifetime value

Module 10: Predictive Analytics – Preparing the data

- Module introduction
- Gathering Business Knowledge
- Data Exploration
- The Data and the Data Dictionary
- Univariate analysis and EDD
- Discriptive Data Analytics in Excel
- Outlier Treatment
- Identifying and Treating Outliers in Excel
- Missing Value Imputation
- Identifying and Treating missing values in Excel
- Variable Transformation in Excel
- Dummy variable creation: Handling qualitative data
- Dummy Variable Creation in Excel
- Correlation Analysis
- Creating Correlation Matrix in Excel