

BASIC STATISTICS FOR DECISION MAKING

COURSE CODE: MOOCUBS-A03

DURATION: 07 Hrs.

Course Prerequisites:

Basic knowledge of MS

What you will learn?

1. Different Data Science disciplines+
2. What is Business Intelligence
3. Mathematical and Statistical concepts
4. MS-Excel

Course Description:

Business Intelligence has become an important technology for data professionals today. Learning and working on data science disciplines is crucially important.

This course will cover some Statistical concepts and methods required to study the data at the initial level. We will learn about need of data, data science disciplines, descriptive statistics, inferential statistics, confidence intervals and hypothesis testing.

COURSE DETAILS

MODULE 1: BUSINESS INTELLIGENCE AND IMPORTANCE OF DATA

TOPIC 1: Business Intelligence

Lecture 1.1: What does the course cover?

TOPIC 2: Why data is important?

Lecture 2.1: Need of Data

Lecture 2.2: Traditional Data and Big Data

MODULE 2: INTRODUCTION TO DATA SCIENCE DISCIPLINES

TOPIC 1: Data Science disciplines

Lecture 1.1: Data Analytics and Business Analytics

Lecture 1.2: Business Intelligence, Machine Learning and AI

Lecture 1.3: Software and programming languages used

Lecture 1.4: Job positions

MODULE 3: STATISTICS

TOPIC 1: Introduction to Statistics

Lecture 1.1: Population vs Sample

TOPIC 2: Descriptive Statistics

Lecture 2.1: Types of Data

Lecture 2.2: Levels of Measurement

Lecture 2.3: Categorical and Numerical variables

Lecture 2.4: Mean, Median and Mode

Lecture 2.5: Variance

Lecture 2.6: Standard Deviation

Lecture 2.7: Covariance

Lecture 2.8: Correlation

TOPIC 3: Inferential Statistics

Lecture 3.1: Distribution and Normal Distribution

Lecture 3.2: Standard Normal Distribution

Lecture 3.3: Central Limit Theorem

MODULE 4: CONFIDENCE INTERVAL

TOPIC 1: Introduction to Confidence Interval

Lecture 4.1: Population variance known

Lecture 4.2: Population variance unknown

Lecture 4.3: CI: Two means, dependent samples

Lecture 4.4: CI: Two means, independent samples

MODULE 5: HYPOTHESIS TESTING

TOPIC 1: Hypothesis Testing

Lecture 5.1: Null and Alternative Hypothesis

Lecture 5.2: Rejection region and Significance Level

Lecture 5.3: p-value