



Python for Data Analytics

& Reporting THEMED TRACK

(with R, Tableau & Power BI)

4-Course **Series**

- Business Intelligence using Power BI and Tableau
- Data Analytics using R
- Microsoft 365 Excel
- Data Analytics using Python



Duration of 140 Hours

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Online Query Support

Through LMS, by SME within 48-Hrs

Inaugural Price ₹19,500/-

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Organizations value data as an asset. When managed effectively, data can help define longterm business strategies, improve systems and streamline processes, mitigate risks, and gain a competitive edge. This program will teach learners how to transform data into actionable insights, maximize the value of data for an organization, analyze large datasets quickly, and develop reporting dashboards that make data more accessible.

Business intelligence is a strategic tool that helps organizations track trends, actions. and understand their overall operations. It can improve efficiency, and decision-making.









Business Intelligence (Power BI & Tableau)

Module 1: Introduction

Module 2: Power BI

Module 3: Tableau

Module 4: Software Support

a. Support Material

b. Final Assessment

c. Power BI and Tableau Instructions

d. oftware Download Instructions





Data Analytics using R

Module 1: Introduction and Programming

- 1. Introduction to Data Analytics
- 2. Introduction to R
 - a. R programming
 - b. R programming Case Study
 - c. Customer Churn

Module 2: Statistics and Visualization

- 1. Data Visualization: Various graphs, charts
- 2. Data Visualization: Advance
- 3. Descriptive Statistics: Basic statistical techniques including data properties: Hypothesis testing DPLYR package.
- 4. Linear Regression Model
- 5. Multinomial Linear Regression Case Study
- 6. Logistic Regression
- 7. Multinomial Logistic Regression
 - a. Multinomial Logistic Regression Case Study

Module 3: Advance Methods

- 1. Introduction to Artificial intelligence, ML and Deep learning
- 2. Neural Networks
- 3. Support Vector Machines (SVM)
- 4. Support Vector Machines (SVM) Case Study
- 5. Decision Tree
- 6. Random Forest
- 7. K-nearest Neighbors
- 8. K-nearest Neighbors Case Study
- 9. Clustering (K Means)
- 10. Principle Component Analysis
- 11. Principle Component Analysis Case Study













Microsoft 365 Excel

Module 1: MS Excel Essentials: Functions and Tools

- 1. Data management and formatting
- 2. Referencing in Excel
- 3. Data split
- 4. Data validation
- 5. Adding hyperlinks
- 6. Logical functions
- 7. Lookup functions
- 8. Conditional functions
- 9. SUMPRODUCT function
- 10. Large and small values
- 11.Data concatenation
- 12. Working with dates and time
- 13. Financial functions
- 14. Text-oriented functions
- 15. Aggregate function
- 16. OFFSET function
- 17. INDIRECT function
- 18. Formula auditing
- 19. Statistical functions
- 20. Using Range Names
- 21. Excel Table
- 22. What If Analysis
- 23. Protecting Worksheet and Workbook
- 24. Dashboards and Data Summarization

Module 2: Microsoft 365 Excel

- 1. MS-365 Excel overview
- 2. Create dynamic sequence
- 3. Unique, sort and filter
- 4. New age lookup
- 5. Text-oriented functions
- 6. New data types
- 7. Create customized functions in Excel
- 8. Other functions
- 9. Assessment and study material











Data Analytics using Python

Module 1: Basic Python

- 1. Getting started with Python
- 2. Data and information management with Python Containers in Python
- 3. Conditional statements and control structures
- 4. Functions in programming
- 5. Functional programming in Python
- 6. Exceptions handling in Python
- 7. Python advanced topics
- 8. Python projects to check the knowledge
- 9. File handling and other OS interactions

Module 2: Python for Data Science

- 1. Lecture on introduction to Vectors, Matrices, and NumPy
- 2. Lecture on introduction to Data Frame manipulation series
- 3. Introduction to Data Frame manipulation
- 4. Data Frame manipulation
- 5. Date and time data frame manipulation
- 6. Lecture on Pandas internal commands
- 7. Lecture on visualization in Python
- 8. Lecture on visualization in Python part 2
- 9. Lecture on understanding Seaborn from scratch
- 10. Lecture on exploratory data analytics case study Chipotle

Module 3: Stats for Python

- 1. Basic statistics
- 2. Basic statistics
- 3. Probability theory









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