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# Team Work and Strategy

Good Team , Best Results



CAREER

STRATEGY



**1** 1 to 1  
TRAINING

**4** INTERVIEW  
PREPARATION

**2** CERTIFY  
TRAINERS

**5** CERTIFICATION  
GURANTEE

**3** LIVE  
PROJECT

**6** PLACEMENT  
GURANTEE



# Data Science Data Analytics and Machine Learning

## LIVE Project Training

Become a Data Expert

### Job Profiles in Data Science

#### Data Scientist

- **Role:** Data scientists analyze complex data to uncover patterns, derive insights, and build predictive models. They use statistical analysis, machine learning, and computational techniques.
- **Skills Required:** Programming (Python, R), statistical analysis, machine learning, data visualization, and domain expertise.

#### Data Analyst

- **Role:** Data analysts interpret data and turn it into information that can offer ways to improve a business. They create reports, dashboards, and visualizations.
- **Skills Required:** SQL, Excel, data visualization tools (Tableau, Power BI), statistical analysis.

#### Machine Learning Engineer

- **Role:** Machine learning engineers focus on designing and implementing machine learning models and algorithms that can learn from and make predictions on data.
- **Skills Required:** Advanced programming skills, knowledge of machine learning frameworks (TensorFlow, PyTorch), data engineering, software development.

#### Data Engineer

- **Role:** Data engineers build and maintain the infrastructure (data pipelines, databases) necessary for data generation, storage, and processing.
- **Skills Required:** SQL, ETL processes, big data technologies (Hadoop, Spark), cloud platforms (AWS, Azure, GCP).

#### Business Intelligence (BI) Analyst

- **Role:** BI analysts transform data into insights that drive business decisions. They create and maintain dashboards and reports.
- **Skills Required:** BI tools (Tableau, Power BI), SQL, data modeling, understanding of business processes.

## Data Architect

- **Role:** Data architects design the blueprint for data management systems to integrate, centralize, protect, and maintain data sources.
- **Skills Required:** Data modeling, database management, big data technologies, cloud architecture.

## Statistician

- **Role:** Statisticians apply statistical methods to collect, analyze, interpret, and present data.
- **Skills Required:** Statistical analysis, probability theory, programming (often in R or Python).

## AI Research Scientist

- **Role:** AI research scientists focus on advancing the field of artificial intelligence through research and developing new algorithms and models.
- **Skills Required:** Deep learning, natural language processing, advanced mathematics, research methodologies.

## Benefits of a Career in Data Science

### High Demand and Job Security

- The demand for data science professionals is consistently high across various industries, offering job security and numerous opportunities for career growth.

### Competitive Salaries

- Data science roles typically come with high salaries due to the specialized skills required. This is one of the most lucrative fields in tech.

### Diverse Career Opportunities

- Data science skills are applicable in many industries such as healthcare, finance, retail, tech, and more, providing flexibility in career choices.

### Continuous Learning and Growth

- The field is constantly evolving with new tools, techniques, and technologies, providing opportunities for continuous learning and professional development.

## Impactful Work

- Data scientists often work on solving complex problems and can have a significant impact on business strategies and decision-making processes.

## Collaborative Work Environment

- Data science projects often require collaboration with other departments (e.g., marketing, operations, finance), fostering a collaborative and interdisciplinary work environment.

## Remote Work Opportunities

- Many data science roles offer the flexibility to work remotely, providing a better work-life balance.

## Intellectual Stimulation

- The nature of data science work is intellectually stimulating, involving problem-solving, critical thinking, and creative approaches to data analysis.

Data science offers a wide range of job profiles, each with specific skills and responsibilities. The field provides numerous benefits, including high demand, competitive salaries, diverse opportunities, and impactful work. As industries continue to rely on data-driven decision-making, the importance and growth of data science are expected to rise, making it an attractive career choice for many professionals.

The Data Science with Python course has been designed to provide in-depth knowledge of the various libraries and packages that are required to perform data analysis, data visualization, web scraping, machine learning, and natural language processing using Python. The data science with python course is based on the live projects, demonstrations, assignments, and the case studies to provide a hands-on as well as practical experience to the aspirants.

## ADVANCED EXCEL SYLLABUS

**Ribbon** How to customize our menu.

How to create menu How to rename and manage menu

### **Add-ins**

What is add-ins How to use add-ins in our sheet and use How to share your file public and email Publish excel file/sheet to power bi What is template file. Types of template file and use.

What is use of template file.

What is proofing in Excel.

Working with proofing.

**Paste special** What is normal paste and advance paste Working with advance paste

Transposing data, skip blanks

Paste Link

Format painter and its use

### **Format cell**

Number, Alignment, Font, Border, Fill, Protection

### **Pivot Table**

Working with pivot table

Create pivot table,

Display data using pivot table

Create report

Change data source

Slicer time line

Pivot chart

Working with pivot chart

### **Advance conditional**

**formatting** Create formula in conditional formatting

Create rules

Manage rules

### **Working with**

Data validation

Data Consolidation

Change text into column

Scenario manager

Goal seek

Data table

### **Grouping**

Grouping of data

Ungrouping data

Working Subtotal

### **Assignment1**

### **Assignment2**

### **Formulas**

Vlookup

Hlookup

Choose

Column

Columns

Row

Rows

Index and match

Offset

Transpose

Hyperlink

Countif

Sumif

Countifs

Sumifs

Averageif

And, OR, NOT

Sum product

Subtotal

Iserror

Isblank

Isformula

Iseven

Isodd

Isnumber

Islogica

If nested if

Edate

Emonth

Days360

Datevalue

Weekday

Days

Hour

Minute

Month

Evaluating with formula

Nested function

Working with nested function

Trace precedence

Trace dependence

### **Assignment 3**

### **Assignment 4**

### **Formula References**

Relative

Absolute

Mixed Working with formula references

### **Name manager**

How to create and use name manager

Working with name manager

### **Macro**

How to create macro

How to use macro

How to edit macro

Rename macro

### **Chart**

Create chart

Working with different charts

Protect and Share workbook

### **Assignment 5**

### **Importing Data**

From web

From other file

From web

Other Data sources

**Working with short cut keys**

**Preparation for interview**

**Working with Final project**

**Job Assistance for 100%**

# Course Content

## Introduction to Data Science

- What are Analytics and Data Science?
- Overview of Data Science and Analytics
- Why is Analytics becoming popular now?
- Application of Analytics in business
- Analytics Vs Data warehousing and MIS Reporting
- Various Terminology in Analytics
- Various Analytics Methodology
- How are businesses using the power of Analytics?
- Various Analytics tools and their usage

## Introduction to Data Science with Python

- Installing Python Anaconda Distribution
- Python native data types
- Basic programming concepts
- Python data science packages overview

## Python Keyword and Identifiers

- Python Comments, Multiline Comments.
- Python Indentation
- Understanding the concepts of Operators
- Arithmetic
- Relational
- Logical
- Assignment
- Membership
- Identity

## Introduction To Variables

- Variables, expression condition and function
- Global and Local Variables in Python
- Packing and Unpacking Arguments
- Type Casting in Python



- Byte objects vs. string in Python
- Variable Scope

## Python Data Type

- Declaring and using Numeric data types
- Using string data type and string operations
- Understanding Non-numeric data types
- Understanding the concept of Casting and Boolean.
- Strings
- List
- Tuples
- Dictionary
- Sets

## Control Structure & Flow

- Statements – if, else, elif
- How to use nested IF and Else in Python
- Loops
- Loops and Control Statements.
- Jumping Statements – Break, Continue, pass
- Looping techniques in Python
- How to use Range function in Loop
- Programs for printing Patterns in Python
- How to use if and else with Loop
- Use of Switch Function in Loop
- Elegant way of Python Iteration
- Generator in Python
- How to use nested Loop in Python
- Use If and Else in for and While Loop
- Examples of Looping with Break and Continue Statement
- How to use IN or NOT IN keyword in Python Loop.

## Python Function, Modules and Packages

- Python Syntax
- Function Call
- Return Statement

- Arguments in a function – Required, Default, Positional, Variable-length
- Write an Empty Function in Python –pass statement.
- Lambda/ Anonymous Function
- Help functions in Python
- Scope and Lifetime of Variable in Python Function
- Nested Loop in Python Function
- Recursive Function and Its Advantage and Disadvantage
- Organizing python codes using functions
- Organizing python projects into modules
- Importing own module as well as external modules
- Understanding Packages
- Random functions in python
- Programming using functions, modules & external packages.
- Map, Filter and Reduce function with Lambda Function
- More example of Python Function

## List

- What is List.
- List Creation
- List Length
- List Append
- List Insert
- List Remove
- List Append & Extend using “+” and Keyword.
- List Delete
- List related Keyword in Python
- List Revers
- List Sorting
- List having Multiple Reference
- String Split to create a List.
- List Indexing
- List Slicing
- List count and Looping
- List Comprehension and Nested Comprehension

## Tuple

- What is Tuple?
- Tuple Creation
- Accessing Elements in Tuple
- Changing a Tuple
- Tuple Deletion
- Tuple Count
- Tuple Index
- Tuple Membership - Tuple Built in Function

## Dictionary

- Dict Creation
- Dict Access (Accessing Dict Values)
- Dict Get Method
- Dict Add or Modify Elements
- Dict Copy
- Dict From Keys.
- Dict Items
- Dict Keys (Updating, Removing and Iterating)
- Dict Values
- Dict Comprehension
- Default Dictionaries
- Ordered Dictionaries
- Looping Dictionaries
- Dict useful methods (Pop, Pop Item, Str , Update etc.)

## Sets

- What is Set?
- Set Creation
- Add element to a Set.
- Remove elements from a Set.
- Python Set Operations
- Frozen Sets

## Python Exception Handling

- Python Errors and Built-in-Exceptions.
- Exception handling Try, Except and Finally

- Catching Exceptions in Python
- Catching Specific Exception in Python
- Raising Exception
- Try and Finally

## Python File Handling

- Opening a File
- Python File Modes
- Closing File
- Writing to a File
- Reading from a File
- Renaming and Deleting Files in Python
- Python Directory and File Management

## Introduction of MS-SQL

- Installing the test environment
- What is SQL?
- Editors and Platforms to learn SQL.
- Using the basic SELECT statement.
- Selecting rows
- Selecting columns
- Counting rows
- Inserting data
- Updating data
- Deleting data
- Import and Export data
- Databases and tables
- SQL syntax overview
- Data Definition, Data Manipulation, Data Control, Transactional Control statements
- Creating tables
- Deleting a table
- Inserting rows into a table
- Deleting rows from a table

- What is NULL?
- Controlling column behaviours with constraints
- Changing a schema with ALTER
- Filtering data with WHERE, LIKE, and IN
- Removing duplicates with SELECT DISTINCT
- Sorting with ORDER BY
- Understanding joins
- Accessing related tables with JOIN
- Multiple related tables
- The Aggregate functions MIN, MAX, AVG, SUM and COUNT, UPPER, LENGTH, LOWER
- The GROUP BY and HAVING clauses Grouping in a combination with joining.
- Stored Procedures
- Overview of window functions

## NumPy Package

- What is NumPy?
- Importing NumPy
- NumPy overview
- NumPy Array creation and basic operator
- NumPy universal function
- Selecting and retrieving data
- Data slicing
- Iterating NumPy Data
- Shape Manipulation
- Stacking and Splitting Arrays
- Copies and Views: no copy, shallow copy, deep copy
- Indexing: Arrays of indices, Boolean Arrays

## Introduction of Pandas

- Selecting data from Pandas Data Frame
- Slicing and dicing using Pandas
- Group By/Aggregate
- Strings with Pandas
- Cleaning up messy data with Pandas
- Dropping Entries



- Selecting Entries

## Pandas Packages

- Importing Pandas
- Pandas overview
- Object creation: Series Object, Data Frame Object
- View Data
- Selecting data by Label and Position
- Data Slicing
- Boolean Indexing

## Data Manipulation using Pandas.

- Data Alignment
- Sorting and Ranking
- Summary Statistics
- Missing Values
- Merging data
- Concatenation
- Combining Data Frames
- Duplicates
- Binning

## Data Munging with Pandas

- Applying functions to data
- String methods
- Merge Data: Concat, Join and Append
- Grouping and Aggregation
- Reshaping
- Analysing Data for missing values
- Filling missing values: fill with constant, forward filling, mean
- Removing Duplicates
- Transforming Data

## Data Visualization with Matplotlib and Seaborn

- Bar Chart using Python Matplotlib

- Column Chart using Python Matplotlib
- Pie Chart using Python Matplotlib
- Area Chart using Python Matplotlib
- Scatter Plot Chart using Python Matplotlib
- Play with Charts Properties Using Matplotlib
- Export the Chart as Image
- Understanding plt. subplots () notation
- Legend Alignment of Chart using Matplotlib
- Create Charts as Image
- Other Useful Properties of Charts.
- Complete Understanding of Histograms
- Plotting Different Charts, Labels, and Labels Alignment etc
- Introduction to Seaborn
- Making a scatter plot with lists
- Making a count plot with a list
- Using Pandas with seaborn
- Tidy vs untidy data
- Making a count plot with a Data frame
- Adding a third variable with hue
- Hue and scattered plots
- Hue and count plots

## Fundamentals of Statistics

- Population and sample
- Descriptive and Inferential Statistics
- Statistical data analysis
- Variables
- Sample and Population Distributions
- Interquartile range
- Central Tendency
- Normal Distribution
- Skewness.
- Boxplot
- Five Number Summary
- Standard deviation

- Standard Error
- Empirical Formula
- Central limit theorem
- Estimation
- Confidence interval
- Hypothesis testing
- P-value
- Scatterplot and correlation coefficient
- Standard Error
- Scales of Measurements and Data Types
- Data Summarization
- Visual Summarization
- Numerical Summarization
- Outliers and Summary

## Machine Learning

### Machine Learning

- Introduction to Machine Learning
- Artificial Intelligence
- Machine Learning
- Machine Learning Algorithms
- Algorithmic models of Learning
- Applications of Machine Learning
- Large Scale Machine Learning
- Computational Learning theory
- Reinforcement Learning

### Techniques of Machine Learning

- Supervised Learning
- Unsupervised Learning
- Semi-supervised and Reinforcement Learning
- Bias and variance Trade-off
- Representation Learning

## Regression

- Regression and its Types
- Logistic Regression
- Linear Regression
- Polynomial Regression

## Classification

- Meaning and Types of Classification
- Nearest Neighbour Classifiers
- K-nearest Neighbours
- Probability and Bayes Theorem
- Support Vector Machines
- Naive Bayes
- Decision Tree Classifier
- Random Forest Classifier

## Unsupervised Learning: Clustering

- About Clustering
- Clustering Algorithms
- K-means Clustering
- Hierarchical Clustering
- Distribution Clustering

## Model optimization and Boosting

- Ensemble approach
- K-fold cross validation
- Grid search cross validation.
- Ada boost and XG Boost

## Visualization with Power BI

- Introduction to Power BI
- Overview of BI concepts
- Why we need BI

- Introduction to SSBI
- SSBI Tools
- Why Power BI
- What is Power BI
- Building Blocks of Power BI
- Getting started with Power BI Desktop
- Get Power BI Tools
- Introduction to Tools and Terminology
- Dashboard in Minutes
- Refreshing Power BI Service Data
- Interacting with your Dashboards
- Sharing Dashboards and Reports

#### Power BI Desktop:

- Extracting data from various sources
- Workspaces in Power BI
- Data Transformation
- Measures and Calculated Columns
- Query Editor

#### Modelling with Power BI:

- Introduction to Modelling
- Modelling Data
- Manage Data Relationship
- Optimize Data Models
- Cardinality and Cross Filtering
- Default Summarization & Sort by
- Creating Calculated Columns
- Creating Measures & Quick Measures

#### Data Analysis Expressions (DAX):

- What is DAX
- Data Types in DAX
- Calculation Types



- Syntax, Functions, Context Options
- DAX Functions
- Date and Time
- Time Intelligence
- Information
- Logical
- Mathematical
- Statistical
- Text and Aggregate
- Measures in DAX
- ROW Context and Filter Context in DAX
- Operators in DAX -Real-time Usage
- Quick Measures in DAX -Auto validations
- In-Memory Processing: DAX Performance

## Modelling with Power BI: Introduction to Modelling

- Optimize Data Models
- Setup and Manage Relationships
- Cardinality and Cross Filtering
- Default Summarization & Sort by
- Creating Calculated Columns
- Creating Measures & Quick Measures

## Power BI Desktop Visualisations:

- How to use Visual in Power BI
- What Are Custom Visuals
- Creating Visualisations and Colour Formatting
- Setting Sort Order
- Scatter & Bubble Charts & Play Axis
- Tooltips and Slicers, Timeline Slicers & Sync Slicers
- Cross Filtering and Highlighting
- Visual, Page and Report Level Filters
- Drill Down/Up
- Hierarchies and Reference/Constant Lines
- Tables, Matrices & Conditional Formatting

- KPI's, Cards & Gauges
- Map Visualizations
- Custom Visuals
- Managing and Arranging
- Drill through and Custom Report Themes
- Grouping and Binning and Selection Pane, Bookmarks & Buttons
- Data Binding and Power BI Report Server

#### Publishing and Sharing:

- Introduction and Sharing Options Overview
- Publish from Power BI Desktop and Publish to Web
- Share Dashboard with Power BI Service
- Workspaces and Apps (Power BI Pro) and Content Packs (Power BI Pro)
- Print or Save as PDF and Row Level Security (Power BI Pro)
- Export Data from a Visualization and Publishing for Mobile Apps
- Export to PowerPoint and Sharing Options Summary

# Clients Feedback and Customer Satisfaction

LOVED IT

EXCELLENT

RECOMMENDED!

REALLY  
COOL

TOPNOTCH

## Client's Feedback

16-LPA



I found the right guide in form of Rexton IT Solutions to attain my goal. They allow me to scale my capability and it feels great to know that you are ready to solve all the IT solutions with ease. I

**Gaurav**  
*Administrator*



## Client's Feedback

11-LPA



I was looking for a course that can pump my career and help me in getting the highest position in a company on the basis of skills I possess. I came across Rexton IT Solutions and immediately joined it. The positive vibes I got from the trainers motivated me to achieve something in my professional life.

**Amit**  
*Network Administrator*



9-LPA



Rexton IT Solutions offer the best training, paper modules and testing. This helped me get a job in a well-recognized organization. I appreciate and thank them to make everything simple for me.

**Pooja**  
*Network Engineer*



11.5-LPA



I am happy to get the opportunity to talk about the Rexton IT Solutions. My honest views regarding the training center are that no one offers such kind of environment. The trainers are well-versed with the courses and update the students with latest technologies time-to-time.

**Mirdul**  
*System Admin*



## Client's Feedback

## Client's Feedback



# Contact us!

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# Thank You