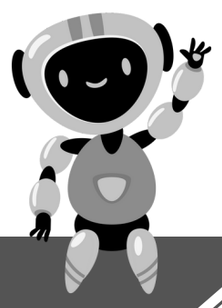
Analyticशाला

Where Success is at your Virtual Home!

A complete solution designed to address all your analytic and data science needs.



CONTACT US

faizan.ansari@analyticshala.in

+91-8882641988

About AnalyticShala

The technologies are constantly evolving in this fast-paced world.

Most institutions can’t keep pace with the shifting challenges of tomorrow and the new opportunities that emerge every day.

Everyone's ability to pivot and lead new ideas, growth and change matters more than ever now.

At **AnalyticShala**, we nurture technical, non-technical, experienced, non-experienced, innovative and future-minded people. We wish to support every serious hardworking candidate who has the brightest talent in their determined pursuit of professional excellence and personal fulfilment.

We effortlessly develop a language and practice leadership that is alive with the context of today and fearless about the challenges of tomorrow.

We combine our pioneering team of Thrive Skills and a robust know-how of the art and science of learning, a deep understanding of the skills employers crave the most and the foundational skills that stand the test of time.

faizan.ansari@analyticshala.in +91-8882641988

Why AnalyticShala Matters

For more than 10 Years, we have witnessed the challenges in training the students and professionals in India.

Everyone has a different mindset which needs different way of training, approach and language which we understand very well.

The **AnalyticShala** emerges from the convergence of this lived wisdom: it combines the rigor and pedigree of the best training programs with strong individual attention and unparalleled outcomes.

The trainings will enable skilled cohorts of ambitious students or early career working professionals to meet with the industry requirements, understand the concepts deeply with personal attention, crack the interview with confidence.

It will go beyond the trainings or the next job to position our learners for career success with unmatched overall focus, which will grow everyone not only in 1-direction but in all required directions.

Lets learn with fun, we look forward to welcoming you!

faizan.ansari@analyticshala.in +91-8882641988

Pedagogy

The classes adopts overall learning pedagogies, with emphasis on action and application, rather than just theory and concepts. The pedagogy involves learning with practical case studies from the corporates and covers technical skills with necessary non-technical skills required to fulfill demand of industry. It also involves group activities and other interactive sessions. Experience of industry practices deliver as a seminar to interact with participants in person, share practical perspectives and insights into real business problems.

Offline Learning

As we believe that not every size fits to everyone. Just like that, not everyone is comfortable with online classes. Students have option to attend the classes offline.

Stuck at a point ?
Not clear with the concept/Term ?
Need personal discussion ?
Still have a doubt ?

Connect offline as per your availability.

faizan.ansari@analyticshala.in +91-8882641988

Online Learning

This is the flexible and recommended option for everyone, attend your classes at your comfort zone. There are some compulsory classes which will be held offline only. You can also leverage this option to clear doubts anytime, by scheduling your doubt clearing sessions.

Self Learning

Students are expected to make maximum use of the learning resources offered. The resources may include textbooks, business cases, videos etc.

faizan.ansari@analyticshala.in +91-8882641988

Programs

Python

Python Essentials (Core)

- Overview of Python -Starting with Python
- Why Python for data science?
  - Anaconda vs. python
- Introduction to installation of Python
- Introduction to Python IDE's (Jupyter/Ipython)
- Concept of Packages -Important packages
  - NumPy, SciPy, scikit -learn, Pandas, Matplotlib, etc
- Installing & loading Packages & Name Spaces
- Data Types & Data objects/structures (strings, Tuples, Lists, Dictionaries)
- List and Dictionary Comprehensions
- Variable & Value Labels –Date & Time Values
- Basic Operations –Mathematical/string/date
- Control flow & conditional statements
- Debugging & Code profiling
- Python Built -in Functions (Text, numeric, date, utility functions)
- User defined functions –Lambda functions
- Concept of apply functions
- Python –Objects –OOPs concepts
- How to create & call class and modules?

Operations with NumPy (Numerical Python)

- What is NumPy ?
- Overview of functions & methods in NumPy
- Data structures in NumPy
- Creating arrays and initializing
- Reading arrays from files
- Special initializing functions
- Slicing and indexing
- Reshaping arrays
- Combining arrays
- NumPy Maths

Overview of Pandas

- What is pandas, its functions & methods
- Pandas Data Structures (Series & Data Frames)
- Creating Data Structures (Data import –reading into pandas)

Cleansing Data with Python

- Understand the data
- Sub Setting / Filtering / Slicing Data
  - Using [] brackets
  - Using indexing or referring with column names/rows
  - Using functions
  - Dropping rows & columns
- Mutation of table (Adding/deleting columns)
- Binning data (Binning numerical variables in to categorical variables)
- Renaming columns or rows

- Sorting (by data/values, index)
  - By one column or multiple columns
  - Ascending or Descending
- Type conversions
- Setting index
- Handling duplicates /missing/Outliers
- Creating dummies from categorical data (using get_dummies ())
- Applying functions to all the variables in a data frame (broadcasting)
- Data manipulation tools (Operators, Functions, Packages, control structures, Loops, arrays etc.)

Case Studies/Projects

Principles of Visualization | Tableau

Introduction to Data Visualization

- Importance and benefits of data visualization
- Types of data visualization: exploratory vs explanatory
- Basic principles of effective visualization (clarity, simplicity, accuracy)

Design Principles for Effective Visualizations

- The Gestalt principles of visual perception
- Use of whitespace, alignment, and balance
- Use of color: color theory, choosing color palettes, avoiding misleading or hard-to-read color schemes
- Typography: font size, readability, and hierarchy
- Avoiding clutter (chartjunk)

Ethics and Avoiding Misleading Visualizations

- Common pitfalls: truncating axes, misleading scales, overcomplicating charts
- Ethical considerations in visualizations: bias, transparency, and accuracy

Tools for Data Visualization

- Beginner-friendly Tools: Excel, Google Sheets
- Intermediate Tools: Tableau, Power BI, Google Data Studio
- Advanced Tools: D3.js, Plotly, Matplotlib, Seaborn, ggplot2, Vega-Lite
- Differences between static and interactive visualizations

Getting Started with Tableau

- What is Tableau? What does the Tableau product suite comprise of? and How Does Tableau Work?
- Tableau Architecture
- Connecting to Data & Introduction to data source concepts
- Understanding the Tableau workspace
- Dimensions and Measures
- Data Types & Default Properties
- Tour of Shelves & Marks Card
- Using Show Me
- Saving and Sharing your work-overview

Data handling & summaries

- Date Aggregations and Date parts
- Cross tab & Tabular charts
- Totals & Subtotals
- Bar Charts & Stacked Bars
- Line Graphs with Date & Without Date
- Tree maps
- Scatter Plots
- Individual Axes, Blended Axes, Dual Axes & Combination chart
- Edit axis
- Parts of Views
- Sorting
- Trend lines
- Reference Lines
- Forecasting
- Filters
- Context filters
- Sets (In/Out, Combined Sets)
- Grouping
- Bins/Histograms
- Drilling up/down – drill through
  - Hierarchies
  - View data
  - Actions (across sheets)

Data handling & summaries

- Explain latitude and longitude
- Default location/Edit locations
- Building geographical maps
- Using Map layers

Calculated Fields

- Working with aggregate versus disaggregate data
- Explain - #Number of Rows
- Basic Functions (String, Date, Numbers etc)
- Usage of Logical conditions

Table calculations

- Explain scope and direction
- Percent of Total, Running / Cumulative calculations
- Introduction to LOD (Level of Detail) Expressions
- User applications of Table calculations

Parameters

- Using Parameters in
  - Calculated fields
  - Bins
  - Reference Lines
  - Filters/Sets
- Display Options (Dynamic Dimension/Measure Selection)
- Create What-If/ Scenario analysis

Building Interactive Dashboards

- Combining multiple visualizations into a dashboard (overview)
- Making your worksheet interactive by using actions
  - Filter
  - URL
  - Highlight
- Complete Interactive Dashboard for Sales & Services

Formatting

- Options in Formatting your Visualization
- Working with Labels and Annotations
- Effective Use of Titles and Captions

Working with Data

- Multiple Table Join
- Data Blending
- Difference between joining and blending data, and when we should do each
- Toggle between to Direct Connection and Extracts

Performance Optimization in Visualization Tools

- Managing large datasets
- Optimizing performance in tools like Tableau

Hands-on Projects

- Project-based learning using real-world datasets
- Visualization of business data, health data, marketing performance, etc.
- Collaborative project assignments for building team-based dashboards

faizan.ansari@analyticshala.in +91-8882641988

SQL/Advanced SQL

Basics RDBMS concepts

- Schema – Meta Data – ER Diagram
- Looking at an example of Database design
- Data Integrity Constraints & types of Relationships (Primary and foreign key)
- Basic concepts – Queries, Data types & NULL Values, Operators and
- Comments in SQL

Utilizing the Object Explorer

- What is SQL – A Quick Introduction
- Installing MS SQL Server for windows OS
- Introduction to SQL Server Management Studio
- Understanding basic database concepts
- Getting started

Data based objects creation (DDL Commands)

- Creating, Modifying & Deleting Databases and Tables
- Drop & Truncate statements – Uses & Differences
- Alter Table & alter Column statements
- Import and Export wizard to get the data in SQL server from excel files or
- delimited files

Data manipulation (DML Commands)

- Insert, Update & Delete statements
- Where, Group By, Order by & Having clauses

faizan.ansari@analyticshala.in +91-8882641988

- Select statement – Subsetting, Filters, Sorting. Removing Duplicates, grouping and aggregations etc
- SQL Functions – Number, Text, Date, etc
- SQL Keywords – Top, Distinct, Null, etc
- SQL Operators - Relational (single valued and multi valued), Logical (and, or, not), Use of wildcard operators and wildcard characters, etc

Accessing data from Multiple Tables using SELECT

- Append and Joins
- Union and Union All – Use & constraints
- Intersect and Except statements
- Table Joins - inner join, left join, right join, full join
- Cross joins/cartesian products, self joins, natural joins etc
- Inline views and sub-queries
- Optimizing your work

Advanced SQL

- Date Functions in SQL
- Stored Procedure
- String/Mathematical/User Defined Functions
- Conversion
- Windows Functions (Rank, Dense_Rank, Row_Number(),Lead and Lag)

faizan.ansari@analyticshala.in +91-8882641988

Excel/Advanced Excel & Dashboarding

Introduction to data handling

- Introduction to Excel Environment
- Formatting and Conditional Formatting
- Data Sorting, Filtering and Data Validation
- Understanding of Name Ranges

Data manipulation using functions

- Descriptive functions: sum, count, min, max, average, counta, countblank
- Logical functions: IF, and, or, not
- Relational operators > >= < <= = !=
- Nesting of functions
- Date and Time functions: today, now, month, year, day, weekday,
- networkdays, weeknum, time, minute, hour
- Text functions: left, right, mid, find, length, replace, substitute, trim, rank,
- rank.avg, upper, lower, proper
- Array functions: sumif, sumifs, countif, countifs, sump roduct
- Use and application of lookup functions in excel: Vlookup, Hlookup
- Limitations of lookup functions
- Using Index, Match, Offset, concept of reverse vlookup

Data analysis and reporting

- Data Analysis using Pivot Tables - use of row and column shelf, values and filters
- Difference between data layering and cross tabulation, summary reports, advantages and limitations

faizan.ansari@analyticshala.in +91-8882641988

- Change aggregation types and summarization
- Creating groups and bins in pivot data
- Concept of calculated fields, usage and limitations
- Changing report layouts - Outline, compact and tabular forms
- Show and hide grand totals and subtotals
- Creating summary reports using pivot tables

Data Visualisation in Excel

- Overview of chart types - column and bar charts, line and area charts, pie charts, doughnut charts, scatter plots
- How to select right chart for your data
- Chart formatting
- Creating and customizing advance charts - thermometer charts, waterfall charts, population pyramids

Overview of Dashboards

- What is dashboard & Excel dashboard
- Adding icons and images to dashboards
- Making dashboards dynamic

Create dashboards in Excel - Using Pivot controls

- Concept of pivot cache and its use in creating interactive dashboards in excel
- Pivot table design elements - concept of slicers and timelines
- Designing sample dashboard using Pivot Controls
- Design principles for including charts in dashboard s - do's and don’t

Business Dashboard Creation

- Complete Management Dashboard for Sales & Services
- Best practices - Tips and Tricks to enhance dashboard designing