# ARBOR
## ACADEMY

# DATA ANALYTICS
## With GEN AI

✓ **Pay After Placement**

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# About Us

At **Arbor Academy,** we are committed to shaping successful IT careers through specialized training, personalized mentorship, and end-to-end placement support. As a leading placement solution provider, we focus on equipping candidates with in-demand technical skills and real-world readiness to secure their dream roles in the IT industry. Our unique approach combines expert guidance, tailored career plans, and strong industry connections to deliver results that matter. Whether you're a fresher or a professional seeking growth, we provide holistic, career-focused solutions that align with your goals. Join us to take the next confident step in your IT career journey.

**1500+**
Placed Student's

**200+**
Total Mentor's

**50+**
Courses

**2000+**
Learning Student's

**100+**
Employees

# COURSES HIGHLIGHTS

**Online & Classroom Mode**

**100% JOB CALLS ASSISTANCE**

**Live Projects**

**Professional Certificates**

**MOCK INTERVIEW**

**MULTIPLE CAREER OPPORTUNITIES**
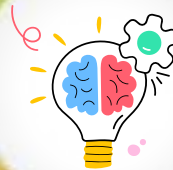
# SERVICES WE PROVIDE

**Pay After Placement**

**Train From Industry Expert Trainers**

**Free Demo Sessions**

**Softskill Session**

**Mock Intereviews**

**ATS Friendly CV Building**

**Naukri Profile Making**

# Achieve Placement in Top **MNC Companies**



Google · intel · Capgemini · intellect live your dream · tcs TATA CONSULTANCY SERVICES

HEXAWARE · Meta · accenture · databricks · Adobe

newgen · Tech Mahindra · salesforce · HUAWEI · Infosys

Mindtree · KPMG · L&T Infotech · Mphasis The Next Applied · ramco

Persistent · Microsoft · FUJITSU · IBM · wipro

HCLTech · Deloitte. · cognizant · Apple · ORACLE

**1** CONFUSED WHAT TO DO IN CAREER..?

**2** CHOOSE ARBOR ACADEMY

**3** CAREER COUNSELING WITH EXPERTS

**4** ONLINE/CLASSROOM EXPERT TRAINING

**5** WHAT WILL YOU GET
- PAY AFTER PLACEMENT MODEL
- HANDS-ON PROJECTS
- 100% PLACEMENT GUARANTEE
- REAL-TIME PRACTICE
- SOFTSKILL SESSIONS

**6** CHARTING NEW PATHS: CAMPUS DRIVE

**7** SECURE YOUR SPOT IN LEADING MNCS

# Tools & Technologies Covered

Microsoft Excel

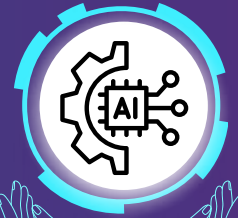Power BI

MySQL or SQL

Python Programming Language

NumPy

Matplotlib

Seaborn

Generative AI (Gen AI)

Gemini (Google AI Tool)

ChatGPT

Notebook LM

Pandas

# Syllabus

## DA- Introduction to DA/DS

- **Difference Between Data Analysis, Data Science, AI, and Business Analysis:**
  - Understand the distinctions between these fields:
    1. Data Analysis: Focused on extracting insights from data using statistical and analytical techniques.
    2. Data Science: Incorporates data analysis, machine learning, and programming to solve complex problems.
    3. AI (Artificial Intelligence): Involves the development of intelligent systems that can perform tasks typically requiring human intelligence.
    4. Business Analysis: Focuses on identifying business needs and determining solutions to business problems through data analysis.

- **Steps of Data Analysis:**
  - Learn about the general steps involved in data analysis, which typically include:
    1. Data Collection: Gathering relevant data from various sources.
    2. Data Cleaning: Removing inconsistencies, errors, and outliers from the data.
    3. Data Exploration: Exploring the data through visualizations and summary statistics to understand its characteristics.
    4. Data Preprocessing: Transforming and preparing the data for analysis, including feature engineering and normalization.
    5. Data Analysis: Applying statistical and analytical techniques to extract insights and patterns from the data.
    6. Interpretation and Communication: Interpreting the results of the analysis and communicating findings to stakeholders effectively.

## Module 2

## DA - Introduction to Business Excel

- **Excel Introduction:**
  - Understand the basics of Excel, including worksheets, cells, rows, columns, and formulas.

- **Excel Functions:**
  - Learn about commonly used Excel functions such as VLOOKUP, XLOOKUP, HLOOKUP, MID, OFFSET, and CHOOSE, and their applications in data manipulation and analysis

- **Text Handling:**
  - Explore techniques for handling text data in Excel, including wrapping text, clearing formatting, and removing duplicates.

- **Find and Replace:**
  - Understand how to use the Find and Replace feature to search for and replace specific content within an Excel workbook.

- **Pivot Tables:**
  - Learn how to create and work with Pivot Tables for summarizing and analysing large datasets efficiently.
  - Understand the basics of Power Query, including installing the Power Query Add-in, overview of the Query Editor, and importing data from various sources.

- **Importing Data:**
  - Learn how to import data from web sources, text files, CSV files, and external Excel workbooks using Power Query.

- **Data Manipulation:**
  - Explore advanced data manipulation techniques in Power Query, including appending Excel tables, merging tables or queries, combining files from folders, and getting a list of file names from a folder.

- **Building Excel Dashboards:**
  - Learn how to create interactive and visually appealing dashboards in Excel using Pivot Tables, Pivot Charts, slicers, and other features.

## Module 3

## DA - Introduction to SQL

- **Introduction to SQL:**
  - Understand what SQL is, why it's used, and its syntax for querying and managing databases.

- **SQL Basic Data Types:**
  - Learn about different data types in SQL, including string, numeric, date, and time data types.

- **SQL Operators:**
  - Explore SQL operators, including arithmetic, multiplication, division, modulus, logical, and set operators.

- **SELECT Statement:**
  - Understand the SELECT statement and its variations, including SELECT with WHERE, GROUP BY, and HAVING clauses.

**Aggregation Functions:**
- Learn about aggregation functions in SQL, including COUNT, SUM, and DISTINCT, for summarizing data.

**LIMIT Clause:**
- Understand how to use the LIMIT clause in MySQL to restrict the number of rows returned by a query.

**SELECT AS:**
- Learn how to use the AS keyword to alias column names or expressions in SQL queries.

**Joins:**
- Explore different types of SQL joins, including INNER JOIN, OUTER JOIN, LEFT JOIN, and FULL JOIN, for combining data from multiple tables.

**ORDER BY Clause:**
- Understand how to use the ORDER BY clause to sort query results based on one or more columns.

**Advanced SQL Queries:**
- Dive into advanced SQL query techniques, such as selecting data from multiple tables, working with dates, handling NULL values, and using logical operators like AND and OR.

## Module 4

## DA - Creating Dashboard with Visualization Tool (Power BI)

**Introduction to Power BI:**
- Understand what Power BI is, its capabilities, and why it's used for data visualization and business intelligence.

**Power BI Installation and Set Up:**
- Learn how to install and set up Power BI on your computer.

**Understanding Power BI Dashboard:**
- Explore the components of a Power BI dashboard and how they work together to visualize data.

**Power Query (ETL Tool):**
- Understand the role of Power Query in data transformation and learn how to use the Query Editor to clean and shape data.

**Power Pivot Table:**
- Learn how to use Power Pivot tables to create relationships between tables and perform advanced data analysis.

**Power View (Visualization Charts):**
- Explore Power View to create interactive and visually appealing charts and visualizations.

**Power BI Services:**
- Understand how Power BI Services complement the desktop application for sharing and collaborating on reports and dashboards.

**Data Connection Types in Power BI:**
- Learn about the various types of data connections available in Power BI, including importing data from different sources.

**Data Analysis Expressions (DAX):**
- Learn the basics of DAX and explore examples of DAX functions for data analysis and calculations

**Format Tools for Charts and Visualization:**
- Understand the formatting options available in Power BI for customizing charts and visualizations.
- Create Tables in Power BI
- Learn how to create tables and manage data within Power BI.

**Text Functions and IF Functions:**
- Explore useful text functions and learn how to create IF, OR, and IF AND functions in Power BI.

**M Language Overview:**
- Understand the basics of M language and its role in data transformation and manipulation.

**Creating Maps in Power BI:**
- Learn how to create maps and change backgrounds in Power BI to visualize geographic data.

**Subtotals, Totals, Cards, Filters, and Slicers:**
- Explore features like subtotals, totals, cards, filters, and slicers for enhancing data analysis and visualization.

**Creating Dashboards:**
- Learn how to create and customize dashboards in Power BI to present data insights effectively.

## Module 5.1

### DA - Introduction to Python

> **Introduction to Python:**
> - Understand why Python is popular and its use cases.

> **Features of Python Programming:**
> - Features of Python Programming:

> **Style Installation:**
> - Set up Python on your machine.

> **Print Function:**
> - Learn to use the print() function to display information.

> **Comments:**
> - Understand single-line and multi-line comments for code documentation.

> **Variables and Data Types:**
> - Learn how to store and manipulate data using variables and different data types.

> **Operators in Python:**
> - Understand arithmetic, assignment, logical, comparison, identity, and membership operators.

> **Collections:**
> - Introduction to basic data structures: List, Tuple, Set, Dictionary.

> **Conditional Statements:**
> - Learn about if, if-else, if-elif-else, nested if-else statements.

> **Looping Statements:**
> - Understand for loops, while loops, nested loops, and the range function.

> **Control Statements:**
> - Learn about break, continue, and pass statements.

> **Functions:**
> - Understand function definition, types of functions, function arguments, calling functions, and lambda functions.

> **Scope Of Variables:**
> - Understand global and local variable scopes.

> **Modules:**
> - Introduction to modules, importing modules, and examples like Math and Random modules. Also, learn about packages.

> **Input - Output:**
> - Learn how to read input from the keyboard and print output to the screen.

> **Files and Exceptions Handling:**
> - Understand file operations such as opening, closing, reading, and writing files. Also, learn about handling exceptions using try, except, and finally blocks.

> **OOP Concepts:**
> - Learn about classes, objects, inheritance, polymorphism, and overloading.

## Module 5.2

### DA - Working with NumPy (Python)

> **Difference Between EDA, AI, ML, and DL:**

> **Math Refresher:**

> **Array Creation:**
> - Learn to create 1D arrays and multi-dimensional arrays using NumPy's array() and ndarray() functions.

> **NumPy Functions:**
> - Explore functions like zeros(), ones(), arange(), linspace(), eye(), etc., for array creation and manipulation.

> **Array Attributes:**
> - Understand attributes like shape, size, data type, and dimensionality using ndarray.shape, ndarray.size, ndarray.dtype, etc.

> **Reshaping and Raveling:**
> - Learn to reshape arrays with reshape() and flatten arrays with ravel().

> **Arithmetic Operations:**
> - Explore element-wise arithmetic operations like addition, subtraction, multiplication, and division.

> **Broadcasting and Upcasting:**
> - Understand broadcasting rules and upcasting for operations on arrays with different shapes.

> **Conditional Operators:**
> - Learn to use conditional operators for element-wise comparisons and boolean masking.

> **Array Indexing and Slicing:**
> - Understand indexing and slicing operations to access elements or sub-arrays.

## Module 5.3

### DA - Working with Pandas (Python)

> **Handle Missing and Categorical Data, Outliers, Feature Engineering, Model Selection:**
> - Learn techniques for handling missing data, categorical variables, outliers, and performing feature engineering in preparation for model selection.

> **Working on Series Objects:**
> - Understand the Series data structure in Pandas and learn how to create, manipulate, and perform operations on Series objects.

> **Indexing on Series:**
> - Explore different indexing methods for accessing and selecting elements from Series objects based on labels, positions, or boolean conditions.

> **Creating DataFrame:**
> - Learn how to create DataFrame objects, which represent two-dimensional labelled data structures, from various data sources such as dictionaries, lists, or arrays.

> **Mult indexing in DataFrame:**
> - Understand the concept of multiindexing in DataFrame, which allows hierarchical indexing along multiple dimensions.

> **Dropping Level, Transposing:**
> - Learn how to drop levels from multiindexing and transpose DataFrame objects to interchange rows and columns.

> **Accessing Rows, Adding and Removing Columns:**
> - Explore techniques for accessing and selecting rows from DataFrame objects and learn how to add and remove columns.

> **Querying and Sorting DataFrame:**
> - Understand how to query and filter DataFrame objects using Boolean conditions and sort DataFrame based on column values.

> **Operations on DataFrame:**
> - Learn how to perform various operations on DataFrame objects, including arithmetic operations, statistical calculations, and applying functions element-wise.

> **Merging and Joining DataFrames :**
> - Learn how to merge and join multiple DataFrame objects based on common columns or indices to combine and consolidate data from different sources.

> **Grouping and Aggregating Data :**
> - Learn how to group data in a DataFrame based on one or more columns and perform aggregation operations such as sum, mean, count, etc., on the grouped data.

## Module 5.4

### DA – Visualization of Data with Matplotlib and Seaborn (Python)

> **Creating and Customizing Line Charts using Matplotlib:**
> - Learn how to create line charts to visualize trends and patterns in data using Matplotlib, and explore customization options to enhance the appearance of the charts.

> **Visualizing Relationships between Variables using Scatter Plots:**
> - Understand how to create scatter plots to visualize the relationship between two or more variables, identify patterns, and detect correlations or clusters in the data.

> **Studying Distributions of Variables using Histograms & Bar Charts:**
> - Explore techniques for creating histograms and bar charts to visualize the distribution of a single variable or compare distributions across different categories.

> **Visualizing Two-Dimensional Data using Heatmaps:**
> - Learn how to create heatmaps to visualize two-dimensional data, such as correlation matrices or spatial data, using Matplotlib or Seaborn.

> **Box Plots and Violin Plots for Visualizing Distributions:**
> - Explore how to create box plots and violin plots to visualize the distribution of data, including measures of central tendency, variability, and potential outliers.

> **Pair Plots and Joint Plots for Exploring Relationships:**
> - Learn how to create pair plots and joint plots to explore relationships between multiple variables simultaneously, including scatter plots with marginal histograms or kernel density estimates.

> **Exploratory Data Analysis (EDA) on a Dataset:**
> - Learn the basics and importance of EDA.
> - Summarize dataset characteristics: size, shape, data types, missing values.
> - Use descriptive statistics and visualizations to understand distributions and variability.
> - Perform data cleaning tasks: handle missing values, outliers, and duplicates.
> - Use statistical tests and correlation analysis to identify relationships between variables.
> - Visualize relationships using scatter plots, histograms, box plots, and correlation matrices.

- Utilize advanced visualization techniques like pair plots, heatmaps, and cluster maps.

## Module 6

## Gen AI for Data Analytics

### ❯ Foundations of Artificial Intelligence
- Introduction to AI
- The Essentials of Artificial Intelligence
- Understanding AI vs. ML
- Supervised vs. Unsupervised Learning
- AI Applications
- AI Model
- Individual Exercise: Using AI to express appreciation in email
- Team Activity: Using AI in email draft

### ❯ Introduction to Generative AI and Prompt Engineering
- Introduction to Gen AI and Prompt Engineering
- Generative AI and its Use Cases
- AI Models: Generative vs Traditional
- Understanding Large Language Models (LLMs) and Generative AI
- Prompt Engineering: Overview and Guide
- Language Models Perform Reasoning via Chain of Thought
- Tips to Enhance Your Prompt-Engineering Abilities
- Prompt Engineering for Gen AI

### ❯ Productivity with AI Tools - Gemini
- AI Tools to Boost Productivity
- Gemini for Google Workspace
- Role-Specific Prompts & Use Cases
- Tips to Write Prompts using Gemini
- Gemini in Gmail
- Draft an Email with Gemini
- Refine Prompts and Drafts
- Generate an E-mail using Gemini - Activity
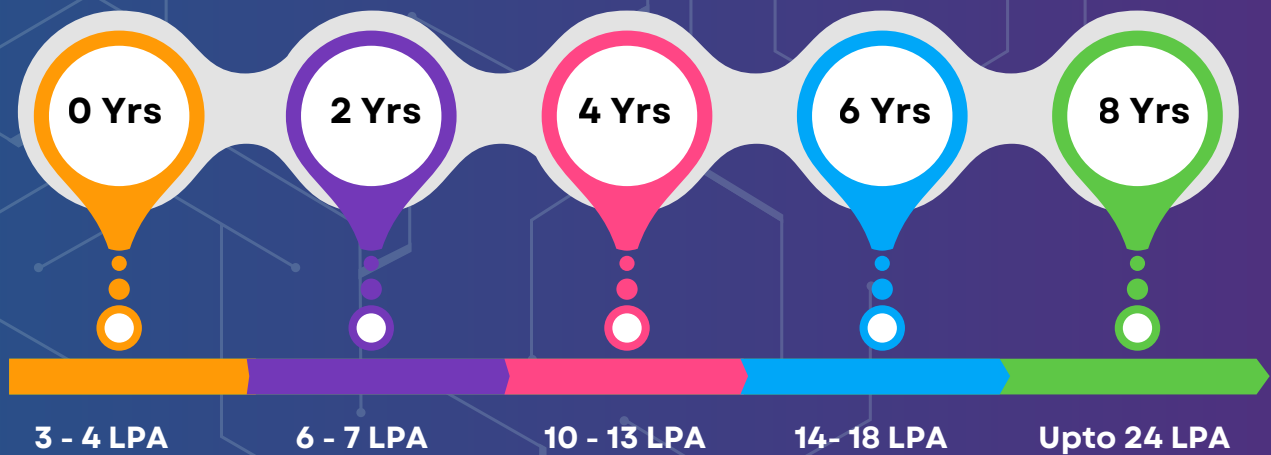
### ❯ Comparative AI Tools and Applications
- Introduction to ChatGPT
- Comparison between the AI tools: Perplexity vs ChatGPT
- Introduction to Notebook LM

### ❯ AI for Creative and Educational Domains
- AI for Creative Industries (Video Editing, Content Creation, AI Art)
- Activity on Content/Image/Video Creation
- AI for Education (Personalized Learning Tool, Lesson Planning)
- Enhancing Lesson Planning with AI

# YOUR FUTURE AS A DATA ANALYST

## SALARY RANGE

| 0 Yrs | 2 Yrs | 4 Yrs | 6 Yrs | 8 Yrs |
|-------|-------|-------|-------|-------|
| 3 - 4 LPA | 6 - 7 LPA | 10 - 13 LPA | 14- 18 LPA | Upto 24 LPA |

## Master In DATA ANALYST

- YOUR DREAM JOB IS AHEAD
- COURSE EXAM
- COURSE EXAM
- ADVANCE SKILLS
- INDUSTRY EXPERT TRAINING
- PROFILE BUILDING
- ENROLL IN ARBOR ACADEMY

# WHY CHOOSE ARBOR ACADEMY

- Flexible EMI Plans
- Adaptive LMS
- Industry Experienced Trainers
- Free Wifi Facilities
- Live Projects With Hands-on Experience
- Be Different With Master Certificate
- Real World Topics
- Placement Drives
- Flexible Scheduling
- Interview Calls Assistance & Mock Sessions
- Online, Classroom & Hybrid Batches
- Weekday and Weekend Batches
- 1:1 Mentorship when required
- Ongoing Career Support
- Affordable Programs Tailored to Your Needs
- Latest Market Tech & Practical Training
- Class Recordings for Missed Classes
- 1 Year FREE Repeat Option
- Workshops & Seminars with Industry Experts
- Unlimited Interview Calls

# TESTIMONIALS
## OF STUDENTS

**Abhishek S.**
★★★★★ a month ago

A great institute for skill development and job placement. The training is industry-focused, and the support from the faculty is excellent. Highly recommended for those looking to start or advance their careers.

# Vishakha K.

★★★★★ a month ago

After joining **Arbor Academy**, I realized how important mentorship is. The team not only taught us skills but also helped us gain confidence. Placement calls started just after 2 months. I am now happily working and paid my fee only after that!

**Asmita**
★★★★☆ 5 months ago

The online lectures at Arbor Academy are well-organized, and the teachers make learning feel personalized even though it's virtual. I appreciate the variety of tools they use, like interactive quizzes and group projects. I would love to see more live discussions, but other than that, it's a great experience.

**Vivek N.**
★★★★★ 5 months ago

I can confidently say I had a fantastic experience with Arbor Academy. The staff was incredibly supportive and helped me secure a job in my field. They guide you every step of the way, from training to securing a placement, and even offer assistance afterward.

# GET INFO OF OUR OTHER DOMAINS

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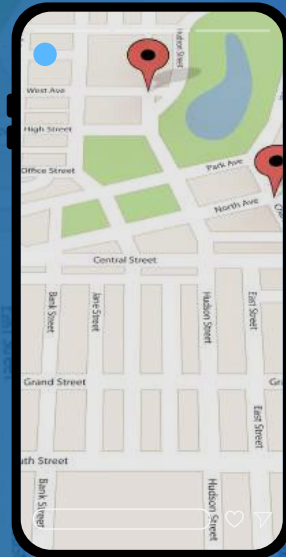🌐 www.arboracademy.in

## LOCATE US:

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