



# DATA ANALYTICS/ ANALYST CERTIFICATION

## A Word from the CEO



### Mr. Ram Tavva

- CEO and MD of Excelr Solutions

An alumnus of IIM-C and a PMP-certified trainer with 25+ years of experience.

Whether you are looking for a pay raise, a career transition, or a new job, upskilling is an unceasing necessity. As a training provider, we understand that this need constantly changes with time and technological evolution, and we tailor courses accordingly. We believe that complete learning is a blend of theory and practice. Hence, we offer the kind of post-training support for your assignments and projects that makes us stand apart from our counterparts.

“ Our mission is to accompany people in their journey to excellence and empower them to realize their dream careers. ”

## Our Greatest ACHIEVEMENTS



Best Training Institute by SiliconIndia on Analytics 2015



Top 20 Most Promising PMP Training Institutes in India 2018



Top 20 Most Promising Business Intelligence(BI) Solution Provider Companies.



4.8 Stars on Google Reviews for our Training and Support.



## We're a Deloitte Technology Fast 50 India Winner



We have been recognized as one of the fastest growing technology companies in the Deloitte Technology Fast 50 India Award Ceremony 2022.

This achievement for ExcelR, which has been accompanied by a staggering average growth rate of 257% in three years, marks an incredible milestone and has propelled our transformation into a global company.

This reflects our dedication towards “Raising Excellence” and demonstrating the company’s professionalism. Our top priority is to provide unparalleled training and consulting to students and professionals in India and abroad so they can shape their future in the right direction.

On the heels of this good news, we are more committed than ever to creating a state-of-the-art platform for all of you to succeed in your career and come out with flying colors.

## We're Also a Partner of FutureSkills Prime, A MeitY-NASSCOM® Digital Skilling Initiative

We have successfully collaborated with FutureSkills Prime, a first-of-its-kind partnership between MeitY and NASSCOM, to build a digital skilling ecosystem and make India a global digital talent in emerging technologies.

This collaboration will facilitate continuous learning and knowledge enhancement of graduates and working professionals with regard to their aspirations and aptitude, improving their employability.

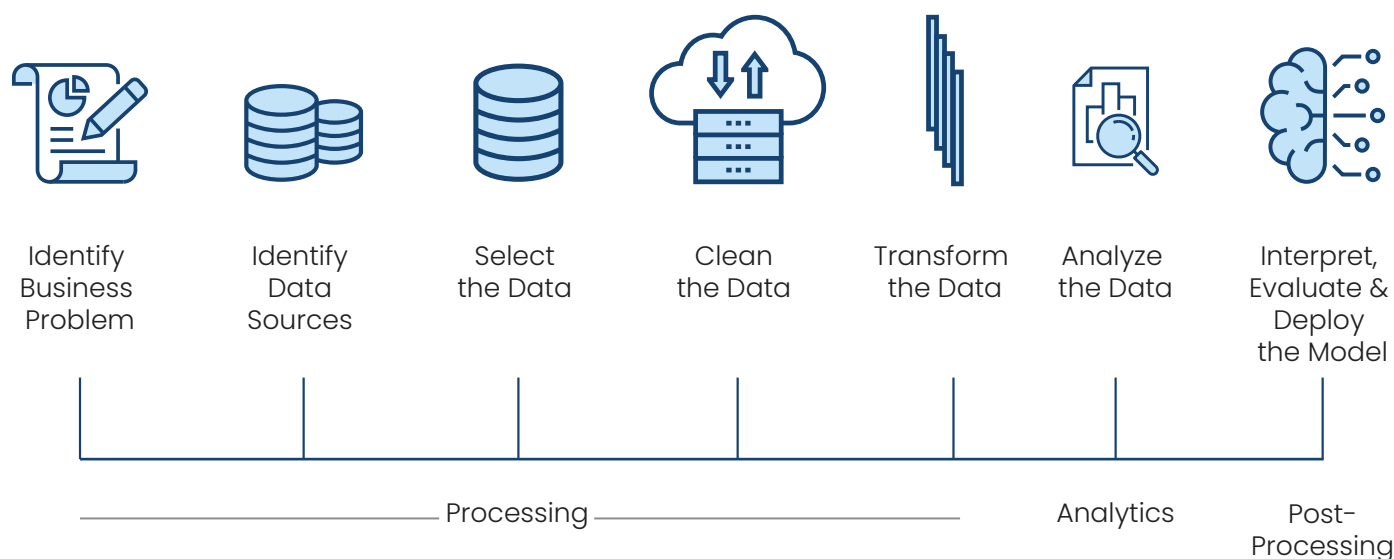
We're proud to share in and contribute to the national interest, and we will continue to play a significant role in the digital upskilling revolution in the years to come.



## Data Analyst/Analytics: A Complete Overview

This 150-hour Data Analyst Certification Training, is an ideal program for freshers and working professionals to gain a thorough understanding of data analytics. The extensive curriculum covers MySQL, Excel (Basic & Advanced), Tableau, Power BI, and more. By acquiring skills and working on assignments and projects based on industrial data, you will soon master data analytics best practices. Read through to catch a glimpse of what's inside the course and why you should pursue it at ExcelR.

### Data Analytics Process Model



### Data Analytics: A Process That Boosts Businesses Today

Data analytics is a set of practices that focuses on deriving actionable insights from the generated data and applying them to improve the productivity, efficiency, and revenue of a business.

#### Studies reveal that:

- ★ Data-driven organizations are 19x more likely to be profitable.
- ★ Analytics makes decision-making 5x faster for businesses.
- ★ The average ROI for enterprises using business intelligence and analytics is 1300%.

Now that's worth billions of dollars to a company, and it clearly shows how crucial the role of a data analyst is for any organization!



## Why Should You Invest in the Course?

# 25%

Market growth from 2020 to 2030

# 101,000+

Job Vacancies in India

# 6 LPA

Data Analyst freshers' average salary

# 75%

Job Satisfaction

# 32%

India's share in the global market



Source(s): LinkedIn, Glassdoor, Career Karma

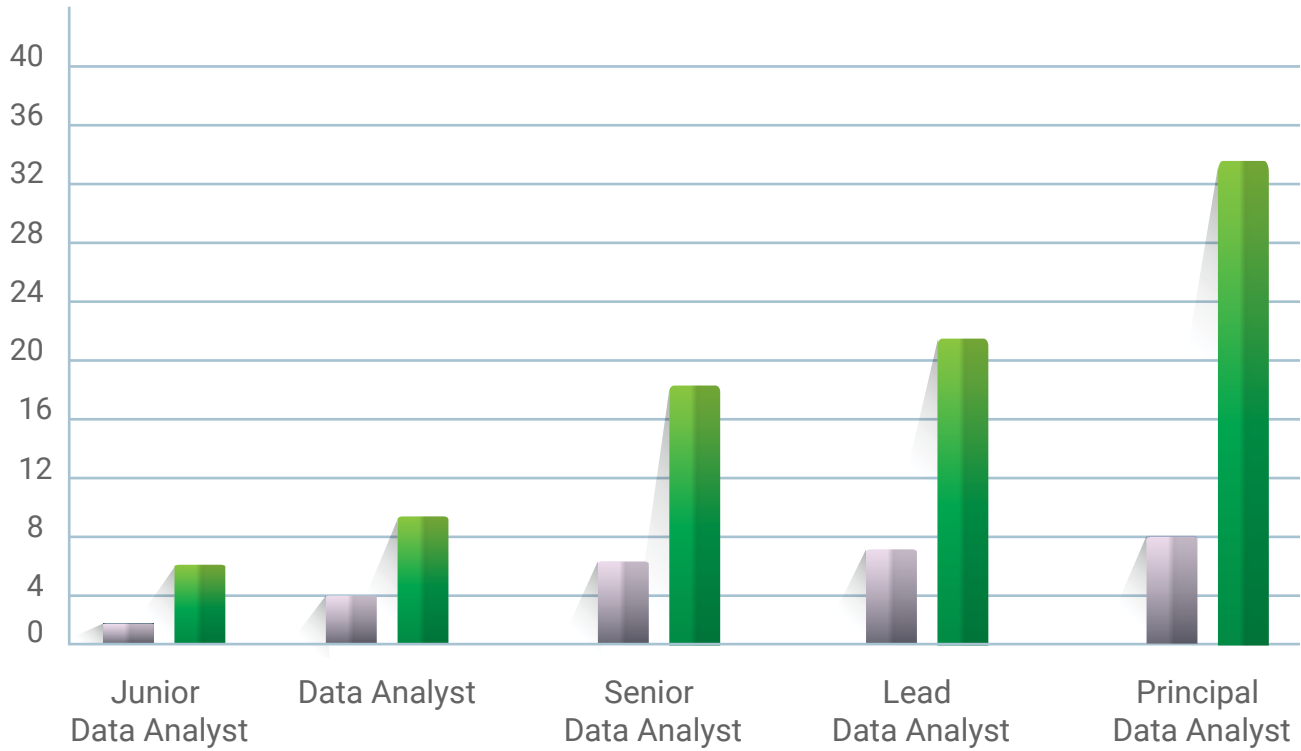
## Top Companies Hiring Data Analysts



and many more...

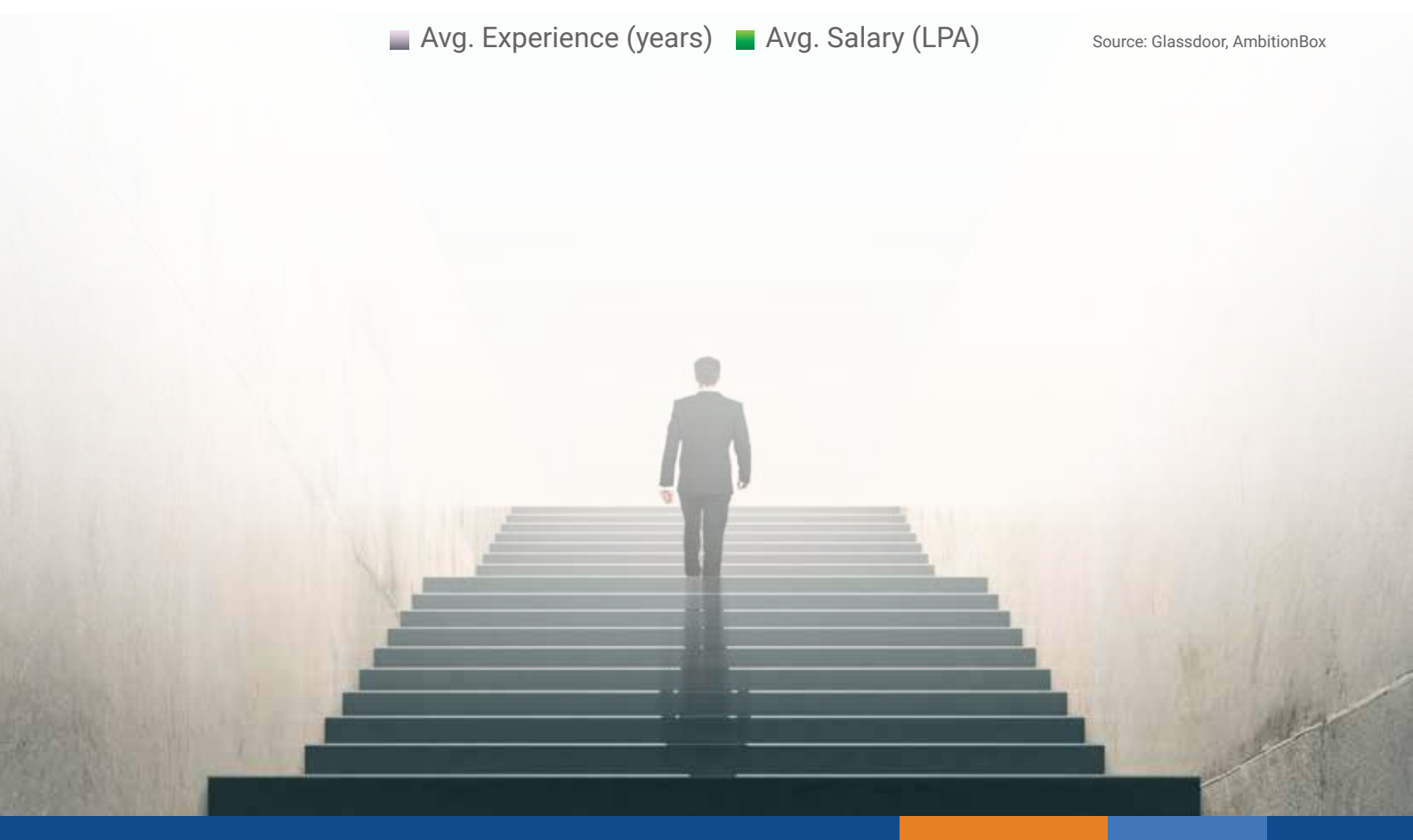
Source(s): Naukri

## Career Trajectory and Salary Trends:



■ Avg. Experience (years) ■ Avg. Salary (LPA)

Source: Glassdoor, AmbitionBox

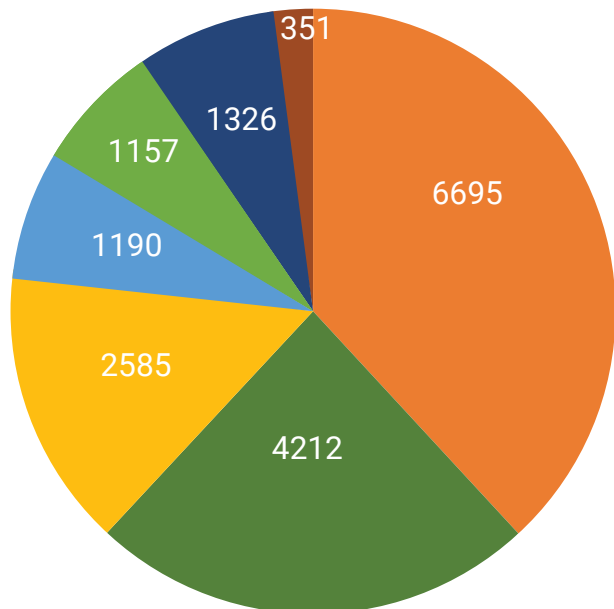
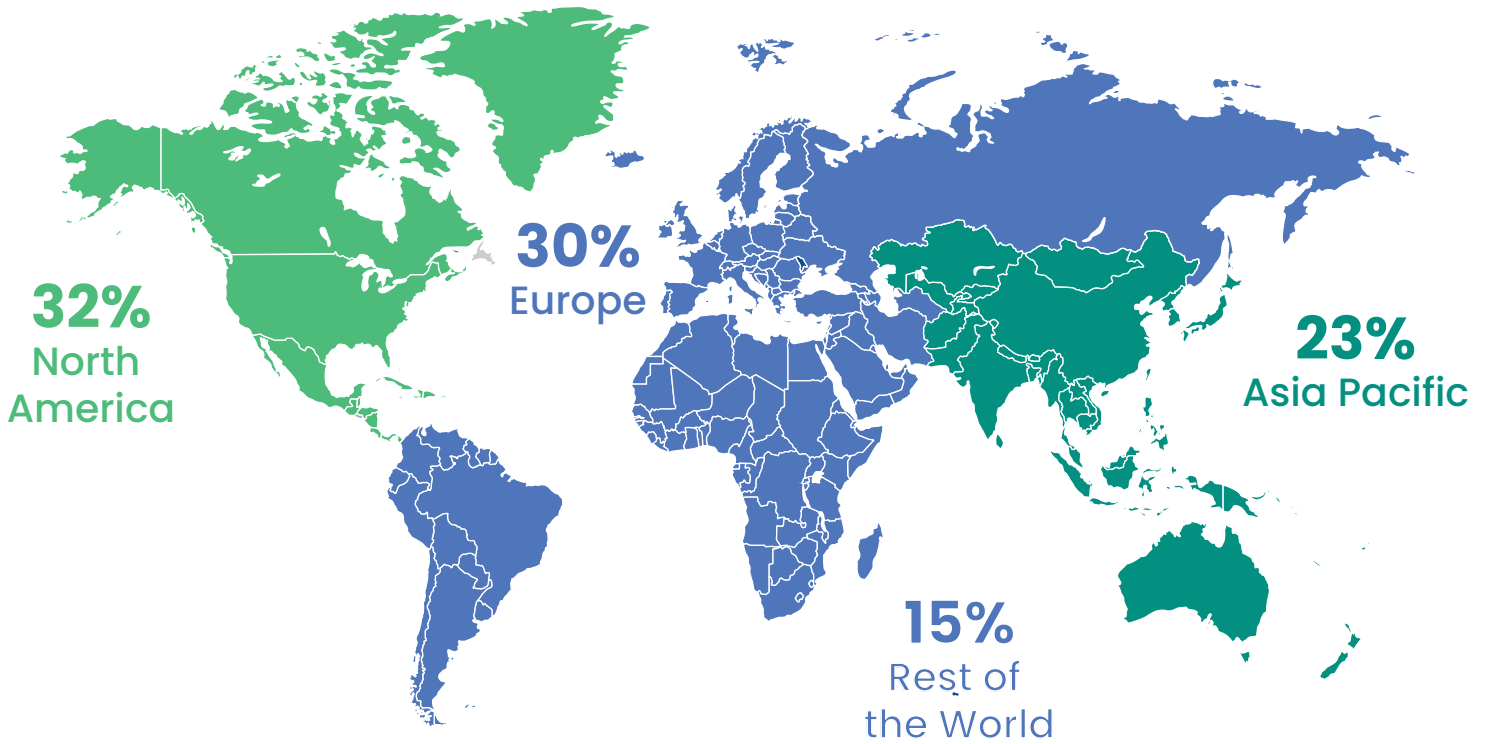




# Global Data Analyst Market

The data analytics market size is estimated to grow from \$73,287.6 million in 2020 to \$135,706.1 million in 2025 at a rate of 13.1%. This will open many job opportunities in the future as a result of this

Source(s): **ResourceandMarkets**



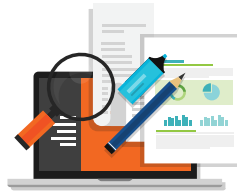
## Top Hiring Industries in India for Data Analytics

Pharma & Healthcare	7%
Telecom	7%
Retail & CPG	7%
Ecommerce	15%
Marketing & Advertising	24%
Travel & Hospitality	2%
Finance & Banking	38%

## Course Highlights



Course Duration  
150+ Hours / 6 Months



5+ Capstone Projects



80+ Assignments  
& Case Studies



4+ Skills and  
8+ Tools Covered



60+ Hours of  
Internship With AiVariant



5 Value Added Courses

Each module is integrated with assignments for you to apply the Data Analytics best practices. The course also comes with **intensive interview preparation** right from Day 1, which will give you thorough preparation to crack interviews with our **2000+ hiring partners**. Upon completing the assignments, you'll have the opportunity to work on capstone projects and mould yourself into a confident Data Analyst who is industry-ready to tackle any challenge.

## Skills Covered



## Tools and Technologies Covered



## Value Added Courses

Our course curriculum doesn't end with the core concepts of Data Analytics. We also provide value-added courses like **Python Programming, Fundamentals of R, Business Statistics, ChatGPT, and SAS (self-paced)**, which go hand-in-hand with the most-updated Data Analytics curriculum and prove essential to stay competitive in this quickly evolving field.



### R Programming

R is a programming language that allows you to clean, organize, analyze, visualize, and report data in new and more powerful ways.



### Python

Python is a powerful and versatile programming language that has many libraries that can be used to clean, manipulate, process, and crunch data.



### Business Statistics

Business Statistics is the application of statistical methods to analyze business data. Companies use business statistics to understand their present and predict their future in order to save money, find new opportunities, and improve operational efficiency.



### ChatGPT

ChatGPT is a chat tool based on a powerful and advanced large language model developed by OpenAI, assisting users in tasks such as answering questions, providing explanations, generating creative content, and more. ChatGPT has gained popularity due to its ability to generate human-like text and its versatility in understanding and generating content across different domains.

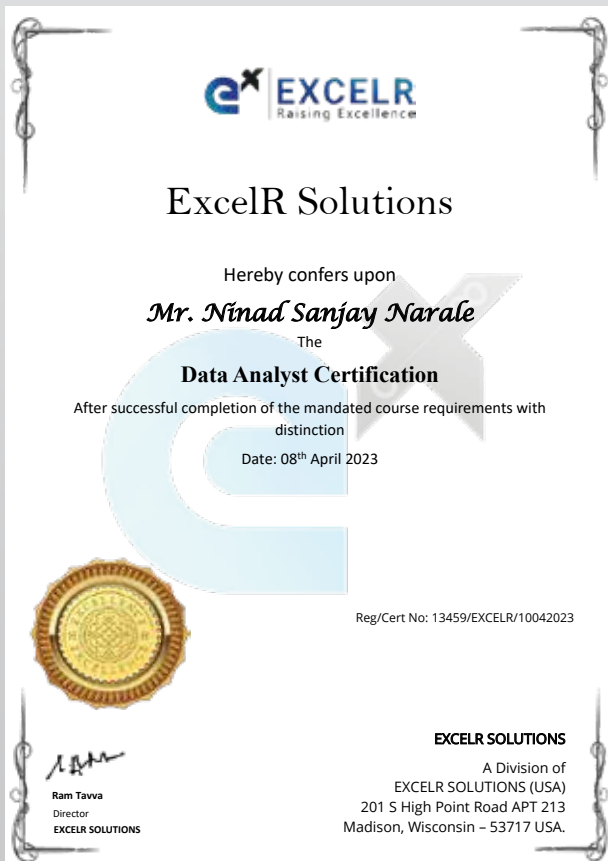
### Introduction to SAS



SAS is a statistical software suite for data management, advanced analytics, multivariate analytics, and predictive analytics that gives data analysts an edge over their competitors

## Your 2-in-1 Certifications

Certificate from **ExcelR**



Internship Certificate from **AiVariant**





Curriculum:

## Data Analytics and Value-Added Courses

### Excel

#### Introduction

- MS Office Versions (similarities and differences)
- Interface (latest available version)
- Row and columns
- Keyboard shortcuts for easy navigation
- Data entry (fill series)
- Find and select
- Clear options
- Ctrl+enter
- Formatting options – Font, Alignment, Clipboard (copy, paste special)

**Lab:** Data entry, Fill series options, Copy Paste Special

#### Referencing, Named ranges, Uses, Arithmetic Functions

- Mathematical calculations with cell referencing (Absolute, Relative, Mixed)
- Functions with name range
- Arithmetic functions (SUM, SUMIF, SUMIFS, COUNT, COUNTA, COUNTIFS, AVERAGE, AVERAGEIFS, MAX, MAXIFS, MIN, MINIFS)

**Lab:** Arithmetic and statistical functions

#### Logical functions

- IF
- AND
- OR
- NESTED IFS
- NOT
- IFERROR
- Usage of mathematical and logical functions nested together

**Lab:** Logical functions

#### Referring data from different tables: Various types of Lookup, Nested IF

- LOOKUP
- VLOOKUP
- NESTED VLOOKUP
- HLOOKUP
- INDEX
- INDEX WITH MATCH FUNCTION
- INDIRECT
- OFFSET

**Lab:** Lookup and reference functions



## Advanced functions

- Combination of arithmetic, logical, lookup functions
- Data validation (With dependent drop down)

**Lab:** Advanced functions

## Date and Text Functions

- Date functions: DATE, DAY, MONTH, YEAR, YEARFRAC, DATEDIFF, EOMONTH
- Text functions: TEXT, UPPER, LOWER, PROPER, LEFT, RIGHT, SEARCH, FIND, MID, TTC, Flash fill

**Lab:** Date and text functions

## Data Handling: Data cleaning, Data type identification, Remove Duplicates, Formatting and Filtering

- Number formatting (with shortcuts)
- CTRL+T (converting into an excel table)
- Formatting table
- Remove duplicate
- SORT
- Advanced sort
- FILTER
- Advanced Filter

**Lab:** Data cleaning, remove duplicates, formatting And filtering

## Data Visualization: Conditional formatting, Charts

- Conditional formatting (Icon sets/Highlighted colour sets/Data bars/custom formatting)
- Charts: Bar, column, lines, scatter, combo, Gantt, waterfall, pie

**Lab:** Data Visualization: Conditional formatting

## Data Summarization: Pivot Report and Charts

- Pivot Reports: Insert, Interface, Crosstable Reports, Filter, Pivot Charts
- Slicers: Add, Connect to multiple reports and charts
- Calculated field
- Calculated item

**Lab:** Data Visualization: Conditional formatting



## Data Summarization: Dashboard Creation, Tips and Tricks

- Dashboard: Types, getting reports and charts together, use of slicers
- Design and placement: Formatting of tables, charts, sheets, proper use of colours and shapes

**Lab:** Data Summarization: Dashboard creation

## Connecting to Data: Power query, pivot, power pivot within Excel

- Power Query: Interface, Tabs
- Connecting to data from other excel files, text files, other sources
- Data cleaning
- Transforming
- Loading data into Excel query
- Using loaded queries
- Merge and append
- Insert power pivot
- Similarities and differences in pivot and power pivot reporting
- Getting data from databases, workbooks, webpages

**Lab:** Connecting to data: Power query

Getting data from databases, workbooks, webpage queries, merge, pivoting

Getting data from databases, workbooks, append

## VBA and Macros

- View tab, add developer tab
- Record macro: Name, storage
- Record macro to format table (Absolute Ref)
- Format table of any size (Relative ref)
- Play macro by button, shape, as command (in new tab)
- Editing macros
- VBA: Introduction to the basics of working with VBA for Excel: Subs, ranges, sheets
- Comparing values and conditions, if statements and select cases.
- Repeat processes with For loops and Do While or Do Until loops
- Communicate with the end-user with message boxes and take user input with input boxes, user form

**Lab:** Record macro

Interface, Sub-end sub,variable, objects

Message boxes, user form



# MySQL

## Introduction to MySQL

- Introduction to Databases
- Introduction to RDBMS
- Explain RDBMS through normalization
- Different types of RDBMS
- Software Installation (MySQL Workbench)

## SQL Commands and Data Types

- Types of SQL Commands (DDL, DML, DQL, DCL, TCL) and their applications
- Data Types in SQL (Numeric, Char, Datetime)

## DQL & Operators

- SELECT: LIMIT, DISTINCT, WHERE, AND, OR, IN, NOT IN, BETWEEN, EXIST, ISNULL, IS NOT NULL, Wild Cards, ORDER BY

## Case When Then and Handling NULL Values

- Usage of Case When Then to solve logical problems and handling NULL Values (IFNULL, COALESCE)

## Group Operations & Aggregate Functions

- Group By, Having clause
- COUNT, SUM, AVG, MIN, MAX, COUNT
- String functions
- Date & Time function

## Constraints

- NOT NULL
- UNIQUE
- CHECK
- DEFAULT
- Primary key
- Foreign Key (Both at column level and table level)

## Joins

- Inner
- Left
- Right
- Cross
- Self joins
- Full outer join



## DDL

- Create
- Drop
- Alter
- Rename
- Truncate
- Modify
- Comment

## DML & TCL Commands

- DML: Insert, Update, and Delete
- TCL: Commit, Rollback, Savepoint, and Data Partitioning

## Indexes and Views

- Indexes (Different Type of Indexes) and Views in SQL

## Stored Procedure

- Procedure with IN Parameter
- Procedure with OUT parameter
- Procedure with INOUT parameter

## Function, Constructs

- User Defined Function
- Window Functions - Rank, Dense Rank, Lead, Lag, Row\_number

## Union, Intersect, Sub-query

- Union
- Union all
- Intersect
- Sub Queries
- Multiple Query

## Exception Handling

- Handling exceptions in a query
- CONTINUE Handler
- EXIT handler

## Exception Handling

- Triggers



# Tableau

## Introduction to Tableau

- What is Tableau?
- What is Data Visualization?
- Tableau Products
- Tableau Desktop Variations
- Tableau File Extensions
- Data Types, Dimensions, Measures, Aggregation concept
- Tableau Desktop Installation
- Data Source Overview
- Live Vs Extract

## Basic Charts & Formatting

- Overview of worksheet sections
- Shelves
- Bar Chart, Stacked Bar Chart
- Discrete & Continuous Line Charts
- Symbol Map & Filled Map
- Text Table, Highlight Table
- Formatting: Remove grid lines, hiding the axes, conversion of numbers to thousands, millions, Shading, Row divider, Column divider
- Marks Card

**Lab:** Bar chart for Sub-category wise SUM(Profit) with positive values green colour and negative values red colour.

## Filters

- What are Filters?
- Types of Filters
- Extract, Data Source, Context, Dimension, Measure, Quick Filters
- Order of operation of filters
- Cascading
- Apply to Worksheets

**Lab:** Show Bottom 3 Products for Apple

## Calculations

- Need for calculations
- Types: Basic, LOD's, Table
- Examples of Basic Calculations: Aggregate functions, Logical functions, String functions, Tableau calculation functions, numerical functions, Date functions
- LOD's: Examples
- Table Calculations: Examples

**Lab:** YTD/QTD/MTD  
% Change, Adding ▲, ▼ icons



## Data Combining Techniques

- What are Data Combining Techniques?
- Types
- Joins, Relationships, Blending, and Union

## Custom Charts

- Dual Axis
- Combined Axis
- Donut Chart
- Lollipop Chart
- KPI Cards (Simple)
- KPI Cards (With Shape)

**Lab:** Donut Chart

## Groups, Bins, Hierarchies, Sets, Parameters

- What are Groups? Purpose
- What are Bins? Purpose
- What are Hierarchies? Purpose
- What are Sets? Purpose
- What are Parameters? Purpose and examples

**Lab:** Parameters in Filters/Sets/Bins

## Analytics & Dashboard

- Reference Lines
- Trend Line
- Overview of Dashboard: Tiled Vs Floating
- All Objects overview, Layout overview
- Dashboard creation with formatting

**Lab:** Same Dashboard with background image

## Dashboard Actions & Tableau Public

- Actions: Filter, Highlight, URL, Sheet, Parameter, Set
- How to save the workbook to Tableau Public website?

**Lab:** Filter Action



## Power BI

### Power BI Introduction and Installation

- Understanding Power BI Background
- Installation of Power BI and checklist for perfect installation
- Formatting and Setting prerequisites
- Understanding the difference between Power BI desktop & Power Query

### The Power BI user interface, including types of data sources and visualizations

- Getting familiar with the interface BI Query & Desktop
- Understanding types of visualization
- Loading data from multiple sources
- Data type and the type of default chart on drag drop
- Geo location map integration

**Lab:** Load the data from excel file and validating the data types and using default charts

### Sample dashboard with Animation Visual

- Financial sample data in Power BI
- Preparing sample dashboard as get started
- Map visual types and usages in different variation
- Understanding scatter Plot chart with Play axis and the parameters.

**Lab:** Variations of Scatter Chart and Map Chart with conditional formatting and using play axis

### Power BI Artificial Intelligence Visual

- Understanding the use of AI in Power BI
- AI analysis in Power BI using chart
- Q&A chat bot and the use in real life
- Hierarchy tree

**Lab:** Create visuals with the help of AI like Q&A Smart Narrative



## Power BI Visualization

- Understanding Column Chart
- Understanding Line Chart
- Implementation of Conditional formatting
- Implementation of Formatting techniques.

**Lab:** Bar & Column chart differences and Coloring and formatting

## Power Query Editor

- Loading data from folder
- Understanding Power Query in detail
- Promote header, Split to limiter, Add columns, append, merge queries, etc.

**Lab:** Formatting the data and removing unwanted fields

## Modelling with Power BI

- Loading multiple data from different format
- Understanding modelling (How to create relationship)
- Connection type, Data cardinality, Filter direction
- Making dashboard using new loaded data

**Lab:** Creating relationships with different Cardinality with examples

## Power Query Editor Filter Data

- Power Query Custom Column & Conditional Column
- Manage Parameter
- Introduction to Filter and types of filter
- Trend analysis, Future forecast

**Lab:** Power Query Custom Column (M-Code) and Manage Parameter

## Customize the data in Power BI

- Understanding tooltip with information
- Use and understanding of Drill Down
- Visual interaction and customisation of visual interaction

**Lab:** Usage of drill down & tool tip



## Customize the data in Power BI

- Drill through function and usage
- Button triggers
- Bookmark and different use and implementation
- Navigation buttons

**Lab:** How to create Bookmarks and Navigation buttons

## Dax Expressions

- Introduction to DAX
- Table Dax, Calculated column, DAX measure and difference
- Eg:- Calendar, Calendar auto, Summarize, Group by, etc.
- Calculated Column
- Related, Lookup value, switch, Datedif, Rankx, Date functions
- Dax Measure and Quick Measure
- Remove filters, Keep filters, All, Allselected, Time Intelligence Functions, Rolling average, YoY, Running total

**Lab:** Revision of the Table dax formulas  
Revision of the Calculated Columns formulas  
Revision of the Calculated Dax formulas

## Custom Visual

- Custom visual and understanding the use of custom
- Loading custom visual, Pinning visual
- Loading to template for future use
- Publishing Power Bi

**Lab:** Creating Visualization and Publishing Power BI Service

## Power BI Service

- Introduction to app.powerbi.com
- Schedule refresh
- Data flow and use power bi from online
- Download data as live in Powerpoint and more.

**Lab:** Complete Power BI Online Services



## Value-Add Courses Curricula

### R Programming

Introduction to R, Installation of R Studio, Data types in R

- Data types (Numeric, Char, logical, Complex, Vector, List, Matrix, Factor, Array, Data frame)
- Relational Operators
- Logical Operators

Decision Making Statements, Loops, Functions

- If, If else, For loop, While loop, Repeat, Functions

Built in Functions in R, Joins, dplyr and ggplot2

- Merging data frames, Analyzing Iris Dataset using apply functions, dplyr package (Filter, Set, Arrange), Data Visualization using ggplot2, Scatterplot, Histogram, Boxplot

### Python Programming

Anaconda installation, Introduction to python, Data types, Operators

- Variables, data types (Integer, Boolean, Float, List, Tuple, String), Operators in Python

Data types Contd, Slicing the data, Inbuilt functions in Python

- Dictionaries, Sequence methods, Concatenate, Repetition, Len, Min Max Functions, Index Position, Addition and deletion of elements, Reverse, Sorting

Sets, Set Theory, Regular Expressions, Decision making Statements

- Sets, re module (Findall, Search, Split, Match) IF, elif, getting input from user, identity operator

Loops, Functions, Lambda functions, Modules

- For, While Loops, Functions, Lambda Functions, Math Module, Calendar Module, Date & Time Module

Pandas, Numpy, Matplotlib, Seaborn

- Data frame creation, using different methods, Using Pandas analysis on Universities Salary data Sets, Visualization using Matplotlib and Seaborn, Numpy Introduction



# Business Statistics

## Descriptive Statistics

- Data Types, Measure of central tendency, Measures of Dispersion, Graphical Techniques,
- Skewness & Kurtosis, Box Plot

## Probability and Normal Distribution

- Random variable, Probability, Probability Distribution, Normal Distribution, SND

## Inferential Statistics

- Sampling Funnel, Central Limit Theorem, Confidence interval, Introduction to Hypothesis Testing, Anova and Chi Square

## Data Cleaning and Insights

- Data Cleaning (Invalid Cells, Blanks, Outliers, Null Values), Imputation Techniques (Mean and Meridian), Scatter Diagram and Correlation Analysis

# ChatGPT

## Introduction to ChatGPT and AI

- What is ChatGPT?
- The history of ChatGPT
- Applications of ChatGPT
- ChatGPT vs other chatbot platforms
- Industries using ChatGPT
- The benefits and limitations of ChatGPT
- Future developments in ChatGPT technology
- Ethical considerations related to ChatGPT and AI

## Types of AI and Chatgpt Architecture

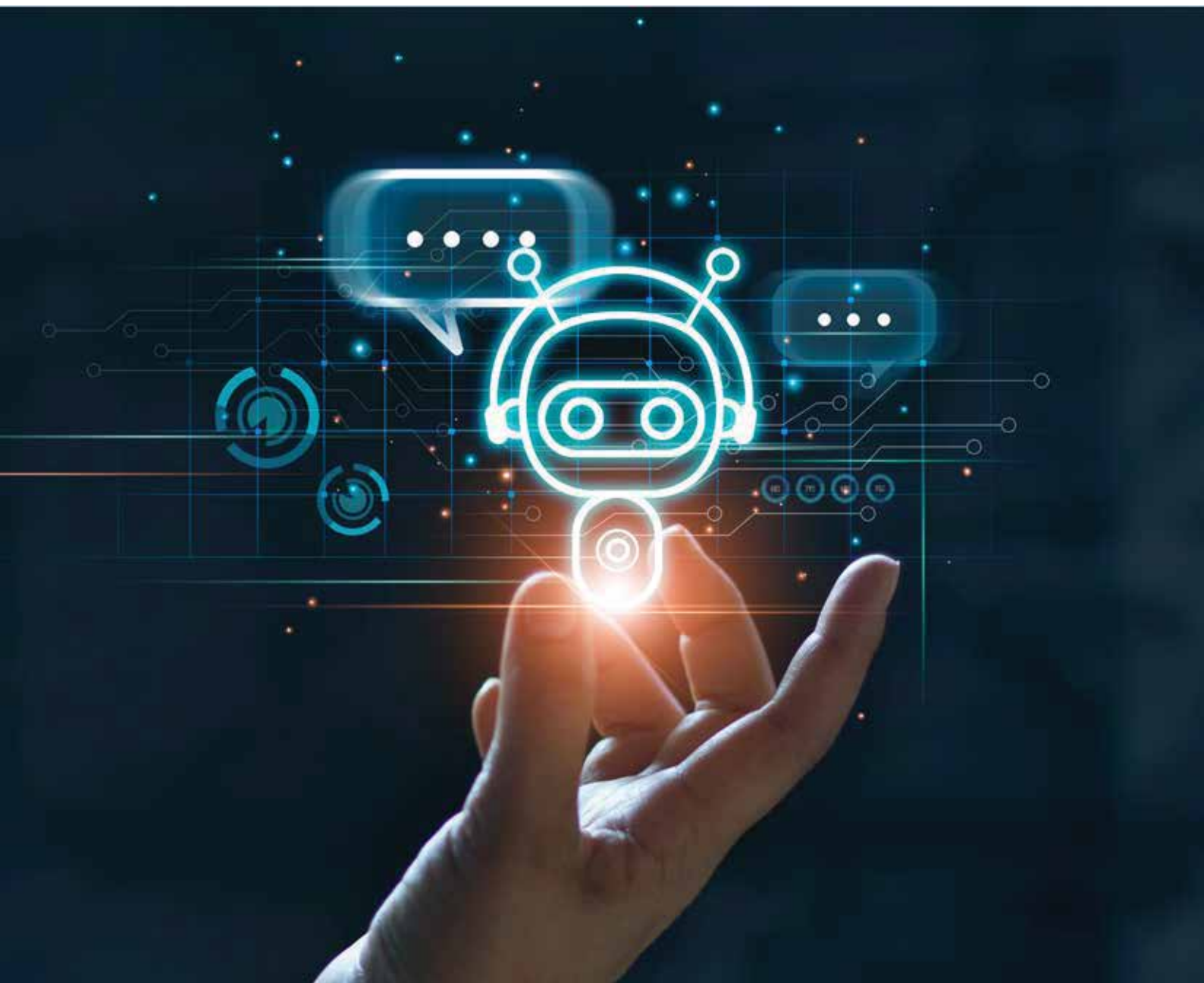
- Narrow AI
- Strong AI
- Superintelligence
- Chatgpt architecture
- Industries using ChatGPT
- The benefits and limitations of ChatGPT
- Future developments in ChatGPT technology
- Ethical considerations related to ChatGPT and AI

## ChatGPT Functionalities and Applications

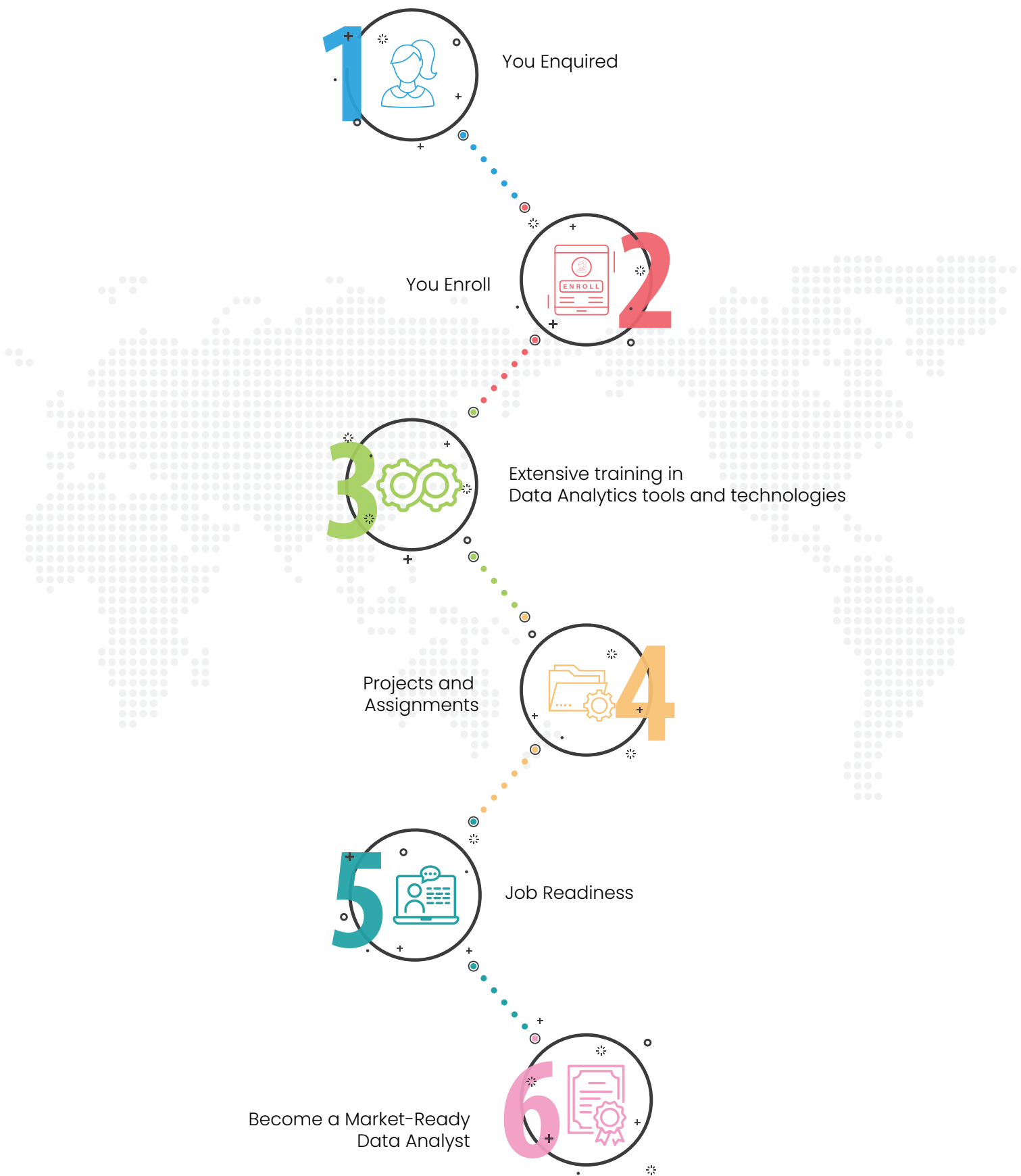
- How does ChatGPT work?
- ChatGPT Functionalities
- Drafting emails and professional communication
- Automating content creation
- Resume and Cover letter creation
- Research and information gathering
- Brainstorming ideas and creative problem solving
- Best Practices for Using ChatGPT

## ChatGPT Prompt Engineering

- What is Prompt Engineering?
- Types of Prompts
- Crafting Effective Prompts
- Using ChatGPT to generate prompt



# Learning Path



## Why ExcelR?



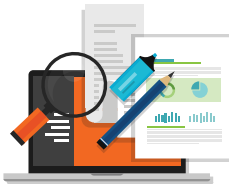
### Expert Faculty

Our faculty is our strength. We have qualified Data Analytics experts, who carry 13+ years of experience in the domain and have a strong passion for training, as your instructors.



### Jumbo Pass

Our Jumbo Pass is a first-of-its-kind offering that allows you to attend one classroom batch and unlimited live virtual classes for the next 365 days with any trainer of your choice.



### Industry-Based Course Curriculum

Considering the unmet gaps in the industry, our course modules are aligned with the latest technological trends and deal with all the essential aspects of Data Analytics.



### Dedicated Post-Training Support

We have a dedicated team to provide extensive support & mentorship to help you excel in your projects and assignments



### Lifetime Access to the Learning Management System

We provide Lifetime Access to the Learning Management System so you can revise and recap concepts by going through the recorded sessions as and when you want.



### Job Readiness Program

Our training doesn't stop with theory and practice. We also take the responsibility of making you job-ready. Our course is inclusive of placement support.



### 4.8/5 Star Reviews on Google

We have had many happy learners over the years and our ratings reflect our ethos of striving to always provide a high-quality learning experience.

# Job Readiness Program

Our dedicated placement teams have a decade-plus of experience transitioning students from classroom to workplace. Here's how it goes:



## Resume Preparation Session

Our mentors will guide you through preparing your personalized resumes connecting your talents, skills, previous experience, etc.



## LinkedIn Profile Optimization

LinkedIn is the platform where you get the tickets to your dream job, and we help you optimize your profile there in the finest way so you bag the best salary in the market.



## Interview Preparatory Sessions From Day 1

We provide intensive interview preparation right from Day 1 to prepare candidates for interviews with our network of 2000+ hiring partners.



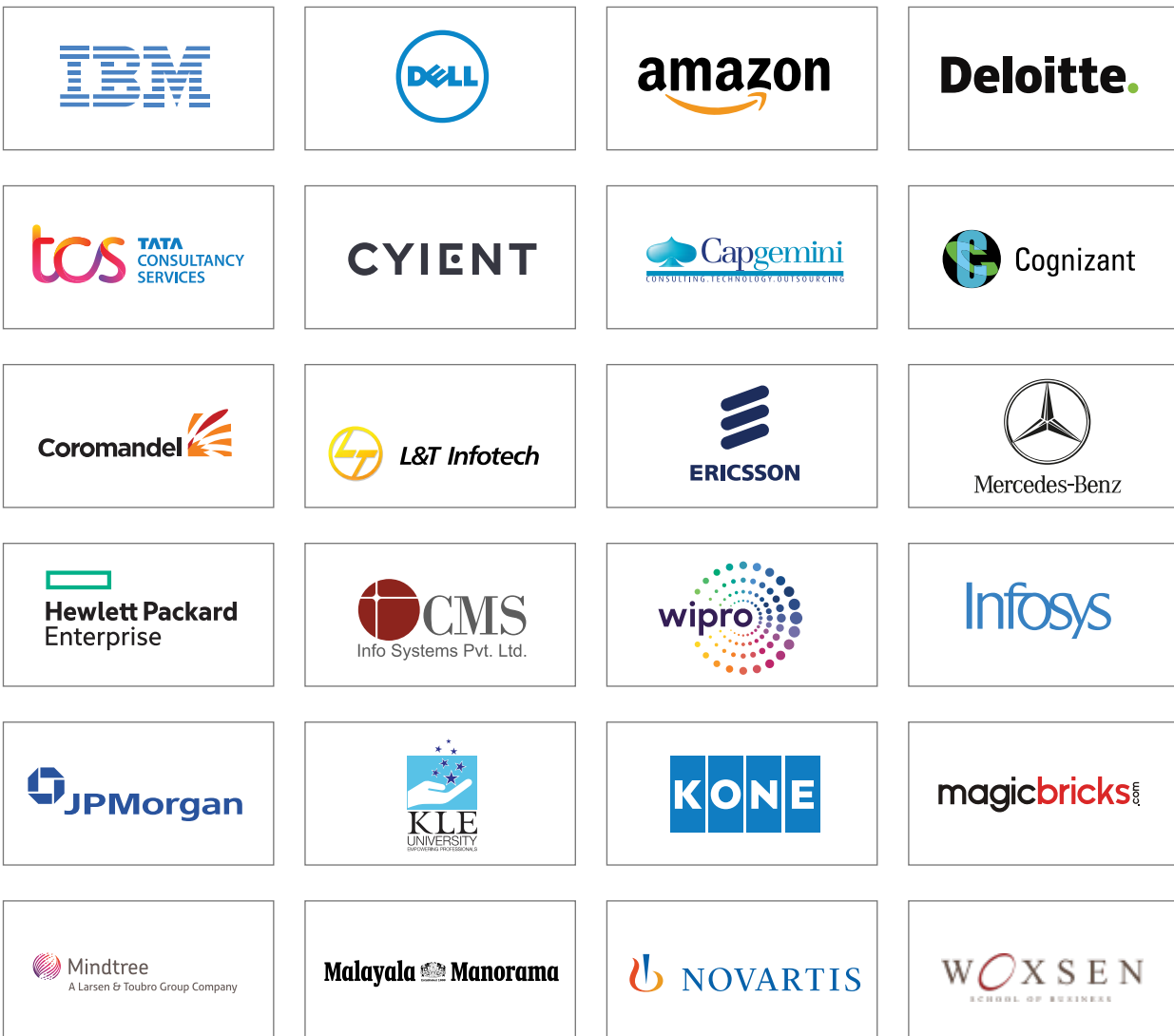
## Mock Interviews

A panel of industry experts will conduct a SWOT analysis and present you with the feedback and ratings of how you performed in the interview and the areas you need to improve.

## Academic Partners



## Our Clientele





and many more...

We don't just TRAIN  
**We build CAREERS**



**INDIA**



Bangalore



Chennai



Hyderabad



Pune



Mumbai

**Overseas**



Malaysia  
Kuala Lumpur



USA  
Houston



UK  
Reading RG1 5DS



Singapore