ADVANCED CERTIFICATION IN
DATA ANALYTICS

Master Data Analytics skills and elevate your analytics journey!

10 Million
Learners

1:1 Personlized
Mentorship

55% Average
Salary Hike

Advanced Certification in
Data Analytics

Get skilled in Data Analytics with the Advanced Certification from Besant Technologies. Learn from IIT faculty and industry experts, with personalized mentorship. Elevate your career prospects and stay ahead in the rapidly evolving field of data analytics

A Trending **Job of 21st Century**

1.2 million Job Postings
According to a recent report by Indeed, there were over 1.2 million job postings for data analytics in 2023
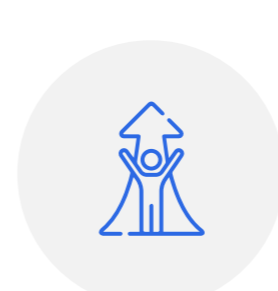
Skill Development
Data Analysts are equipped with various relevant skill, fetching lucrative job offers

Growing Analytics Industry
The CAGR (compound annual growth rate) for data analyst jobs is expected to be 13.5% from 2023 to 2030.

Future-oriented Career
Data Analytics is a budding field; a head start will prove to be beneficial
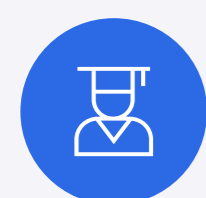
Popular Degree
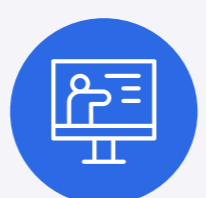40% of the data analyst have masters degree

High Demand
According to a report by the McKinsey Global Institute, there will be a shortage of 2.7 million data analytics professionals by 2023
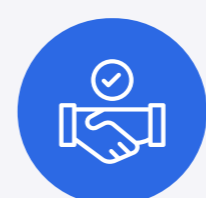
Our **Credentials**

10 Million+
Aspiring Active Students

1,000+
Industry-expert Instructors
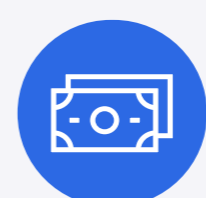
400+
Hiring Partners

500+
Corporates Upskilled

55%
Average Salary Hike

155+
Countries' Learners

About **Program**

The program aims to equip learners with a robust set of abilities, encompassing data analysis, descriptive analytics, probability concepts, predictive analytics, forecasting methodologies, and data infrastructure strategies, alongside attaining proficiency in the requisite domain expertise to thrive in this domain

Online Intensive Learning Program	**7 Months** Live Instruction	**100% Placement** Oriented Classes	**24*7** Support

Key **Highlights**

- 100+ hours of Practical Learning
- Lifetime access to class recordings
- One to one training
- Career Placement Support
- 24*7 Support
- Unlimited Interviews

- 50+ Live sessions across 7 months
- Gain insights from industry experts
- Three industry projects with Multiple case studies
- Resume Preparation and LinkedIn Profile Review
- 100% Placement Oriented Classes
- Course Delivered by Certified Professionals

Course **Structure**

Guided Training Sessions
Receive instruction from industry leaders at premier product companies and startups.

Expert Learning Support Team
Our dedicated team for optimized learning journeys.

Self-paced videos
Engage with top-tier content on your own terms

Tasks and activities
Embark on practical projects for real-world experience.

Coding competitions
Experience firsthand the process of building real projects.

Collaborative learning
Collaborate with peers and expand your knowledge through group learning

Interactive educational experiences
Engage in immersive learning experiences designed to be both educational and enjoyable.
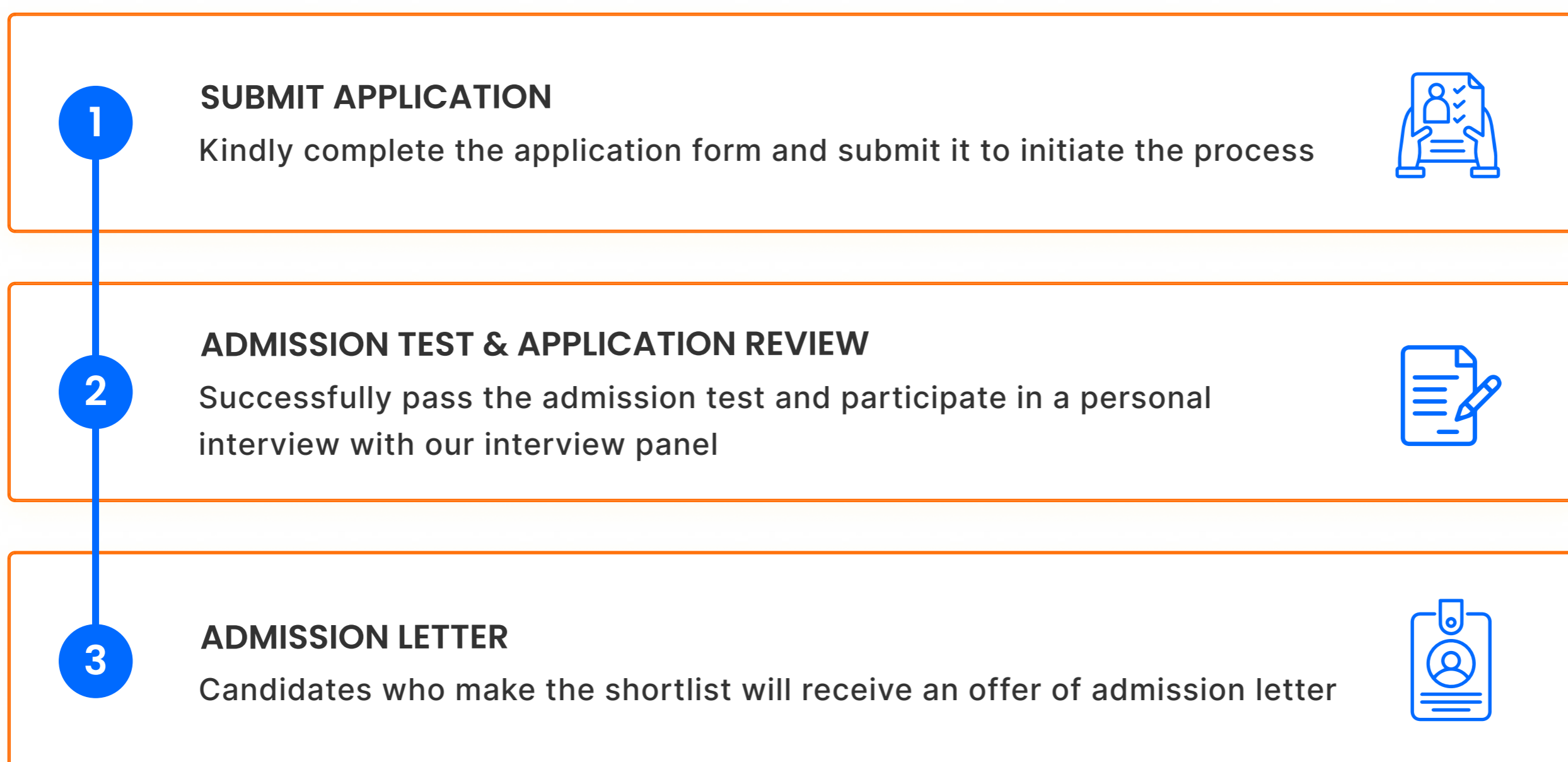
Customized one-on-one learning
Receive personalized instruction catered specifically to your needs and goals.

Who Can **Apply for the Course?**

- ◉ Undergraduates in relevant fields like computer science, mathematics

- ◉ Graduate students seeking specialization in data science, machine learning, or related fields

- ◉ Professionals in IT, finance, healthcare, marketing, and other industries seeking to enhance their analytical skills

- ◉ Career changers from diverse backgrounds aiming to transition into data science roles or fields

- ◉ Data enthusiasts with strong analytical skills and a curiosity for exploring data-driven insights

- ◉ Individuals with a passion for problem-solving intrigued by the application of data science methodologies

Application **Process**

The application process is straightforward, comprising three steps. Candidates need to submit their applications. Selected candidates will receive an offer of admission, and upon payment of the admission fee, their applications will be accepted.

1   **SUBMIT APPLICATION**
Kindly complete the application form and submit it to initiate the process

2   **ADMISSION TEST & APPLICATION REVIEW**
Successfully pass the admission test and participate in a personal interview with our interview panel

3   **ADMISSION LETTER**
Candidates who make the shortlist will receive an offer of admission letter

Connect **With Us**

Data **Analytics Courses**

Course 1
Business Statistics

Course 2
Excel & Advance Excel

Course 3
SQL

Course 4
Power BI

Course 4
Python

Course 5
Tableau
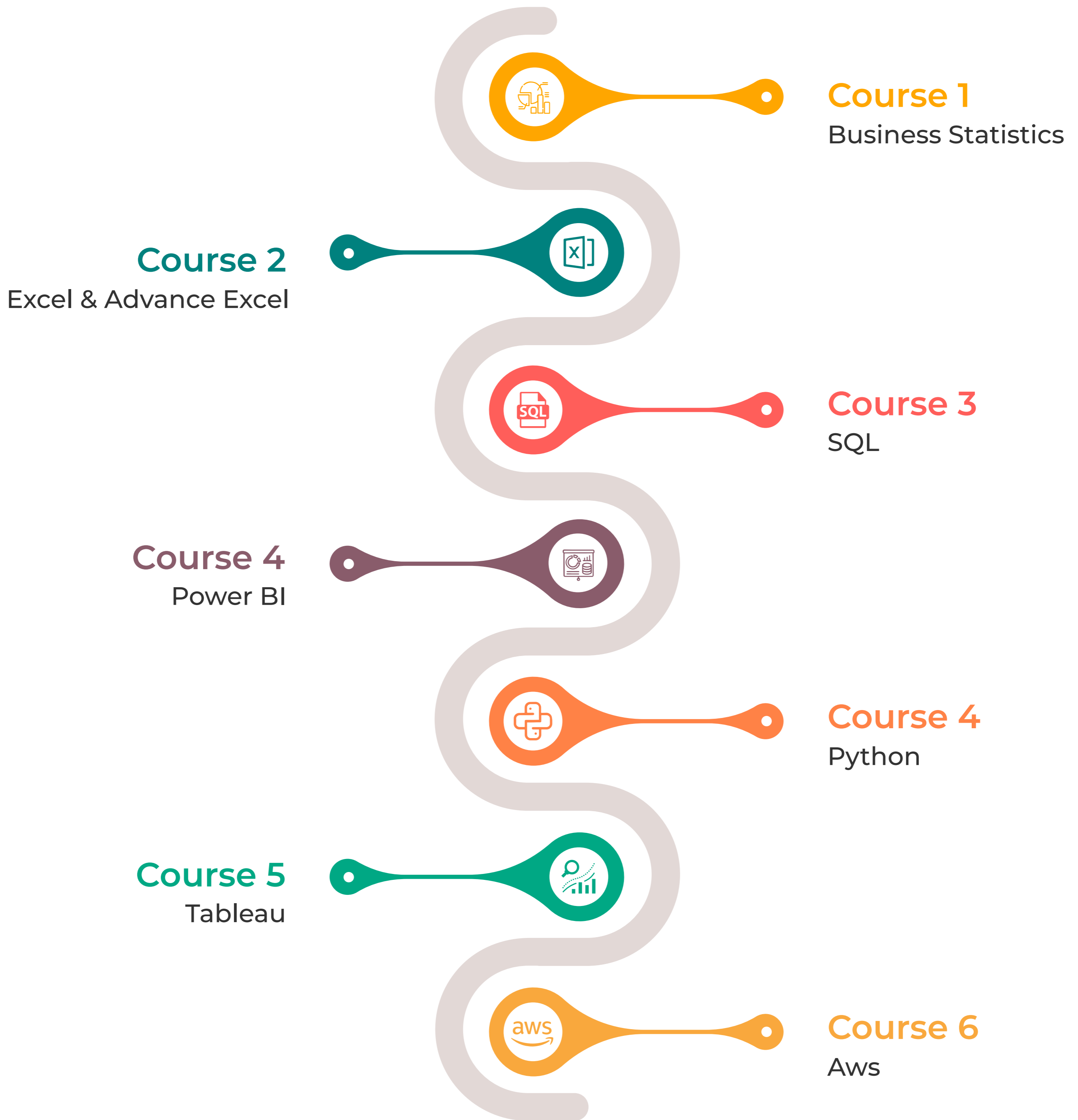
Course 6
Aws

Self-paced **Course**

- R Programming

Course 1

Business Statistics

Introduction to Statistical Analysis

- Counting, Probability, and Probability Distributions
- Sampling Distributions
- Estimation and Hypothesis Testing
- Scatter Diagram
- Anova and Chisquare
- Imputation Techniques
- Data Cleaning
- Correlation and Regression

Introduction to Data Analytics

- Data Analytics Overview
- Importance of Data Analytics
- Types of Data Analytics
- Descriptive Analytics
- Diagnostic Analytics
- Predictive Analytics
- Prescriptive Analytics
- Benefits of Data Analytics
- Data Visualization for Decision Making
- Data Types, Measure Of central tendency, Measures of Dispersion
- Graphical Techniques, Skewness & Kurtosis, Box Plot
- Descriptive Stats
- Sampling Funnel, Sampling Variation, Central Limit Theorem, Confidence interval

Course 2

Excel and Advanced Excel

Basic Excel

- Text to Columns
- Concatenate
- The Concatenate Function
- The Right Function with Concatenation
- Absolute Cell References
- Data Validation
- Time and Date Calculations
- Conditional Formatting
- Exploring Styles and Clearing Formatting
- Using Conditional Formatting to Hide Cells
- Using the IF Function
- Changing the "Value if false" Condition to Text
- Pivot Tables

- Creating a Pivot Table
- Specifying PivotTable Data
- Changing a PivotTables Calculation
- Filtering and Sorting a PivotTable
- Creating a PivotChart
- Grouping Items
- Updating a PivotTable
- Formatting a PivotTable
- Using Slicers
- Charts
- Creating a Simple Chart
- Charting Non-Adjacent Cells
- Creating a Chart Using the Chart Wizard
- Modifying Charts
- Moving an Embedded Chart
- Sizing an Embedded Chart
- Changing the Chart Type
- Chart Types
- Changing the Way Data is Displayed
- Moving the Legend
- Formatting Charts
- Adding Chart Items
- Formatting All Text
- Formatting and Aligning Numbers
- Formatting the Plot Area
- Formatting Data Markers
- Pie Charts
- Creating a Pie Chart
- Moving the Pie Chart to its Own Sheet
- Adding Data Labels
- Exploding a Slice of a Pie Chart
- Data Analysis – Overview
- Types of Data Analysis
- Data Analysis Process
- Working with Range Names
- Copying Name using Formula Autocomplete
- Range Name Syntax Rules
- Creating Range Names
- Creating Names for Constants
- Managing Names
- Scope of a Name
- Editing Names
- Applying Names
- Using Names in a Formula

- Viewing Names in a Workbook
- Copying Formulas with Names
- Difference between Tables and Ranges
- Create Table
- Table Name
- Managing Names in a Table
- Table Headers replacing Column Letters
- Propagation of a Formula in a Table
- Resize Table
- Remove Duplicates
- Convert to Range
- Table Style Options
- Table Styles
- Cleaning Data with Text Functions
- Removing Unwanted Characters from Text
- Extracting Data Values from Text
- Formatting Data with Text Functions

Module 2

Advance Excel (Duration: 15Hrs)

Date Formats (Duration: 2Hrs)

- Converting Dates in Serial Format to MM-DD-YY Format
- Converting Dates in MM-DD-YY Format to Serial Format
- Obtaining Today's Date
- Finding a Workday after Specified Days
- Customizing the Definition of a Weekend
- Number of Workdays between two given dates
- Extracting Year, Month, Day from Date
- Extracting Day of the Week from Date
- Obtaining Date from Year, Month and Day
- Calculating Years, Months and Days between two dates

Module 3

Conditional Formatting (Duration: 2Hrs)

- Highlight Cells Rules
- Top / Bottom Rules
- Data Bars
- Color Scales
- Icon Sets
- New Rule
- Clear Rules
- Manage Rules

Module 4

Sorting (Duration: 2Hrs)

- Sort by Text
- Sort by Numbers
- Sort by Dates or Times
- Sort by Cell Color
- Sort by Font Color
- Sort by Cell Icon
- Sort by a Custom List
- Sort by Rows
- Sort by more than one Column or Row

Module 5

Filtering (Duration: 2Hrs)

- Filter by Selected Values
- Filter by Text
- Filter by Date
- Data Analysis with Excel
- Filter by Numbers
- Filter by Cell Color
- Filter by Font Color
- Filter by Cell Icon
- Clear Filter
- Advanced Filtering
- Filter Using Slicers

Module 6

Other Topics (Duration: 2Hrs)

- Subtotals with Ranges
- Subtotals
- Nested Subtotals
- Quick Analysis
- Quick Analysis with TOTALS
- Sum
- Average
- Count
- %Total
- Running Total
- Sum of Columns

Module 7

Lookup Functions (Duration: 3Hrs)

- Using the VLOOKUP Function

- Using VLOOKUP Function with range lookup TRUE
- Using VLOOKUP Function with range lookup FALSE
- Using the HLOOKUP Function
- Using HLOOKUP Function with range lookup FALSE
- Using HLOOKUP Function with range lookup TRUE
- Using the INDEX Function
- Using MATCH Function

Module 8

Pivoting (Duration: 2Hrs)

- PivotTables
- Creating PivotTable
- Recommended PivotTables
- PivotTable Fields
- PivotTable Areas
- Nesting in the PivotTable
- Filters
- Slicers
- Summarizing Values by other Calculations
- PivotTable Tools
- Using Pictures in Column Charts
- Band Chart
- Thermometer Chart
- Gantt Chart
- Waterfall Chart
- Sparklines
- Pivot Charts
- PivotChart from PivotTable
- PivotChart without a PivotTable
- Working with Multiple Sheets
- Multiple Worksheets with same Structure
- Creating a Formula across Multiple Worksheets
- Summarizing Data in Multiple Worksheets
- What-If Analysis

Course 3

SQL Training

Introduction to Oracle Database

- List the features of Oracle Database 11g
- Discuss the basic design, theoretical, and physical aspects of a relational database
- Categorize the different types of SQL statements
- Describe the data set used by the course

- Log on to the database using SQL Developer environment
- Save queries to files and use script files in SQL Developer

Module 2

Retrieve Data using the SQL SELECT Statement

- List the capabilities of SQL SELECT statements
- Generate a report of data from the output of a basic SELECT statement
- Select All Columns
- Select Specific Columns
- Use Column Heading Defaults
- Use Arithmetic Operators
- Understand Operator Precedence
- Learn the DESCRIBE command to display the table structure

Module 3

Learn to Restrict and Sort Data

- Write queries that contain a WHERE clause to limit the output retrieved
- List the comparison operators and logical operators that are used in a WHERE clause
- Describe the rules of precedence for comparison and logical operators
- Use character string literals in the WHERE clause
- Write queries that contain an ORDER BY clause to sort the output of a SELECT statement
- Sort output in descending and ascending order

Single-Row Functions to Customize Output

- Describe the differences between single row and multiple row functions
- Manipulate strings with character function in the SELECT and WHERE clauses
- Manipulate numbers with the ROUND, TRUNC, and MOD functions
- Perform arithmetic with date data
- Manipulate dates with the DATE functions

Conversion Functions and Conditional Expressions

- Describe implicit and explicit data type conversion
- Use the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions
- Nest multiple functions
- Apply the NVL, NULLIF, and COALESCE functions to data
- Use conditional IF THEN ELSE logic in a SELECT statement

Aggregate Data Using the Group Functions

- Use the aggregation functions in SELECT statements to produce meaningful reports
- Divide the data in groups by using the GROUP BY clause
- Exclude groups of date by using the HAVING clause

Display Data From Multiple Tables Using Joins

- Write SELECT statements to access data from more than one table
- View data that generally does not meet a join condition by using outer joins
- Join a table by using a self join

Use Sub-queries to Solve Queries

- Describe the types of problem that sub-queries can solve
- Define sub-queries
- List the types of sub-queries
- Write single-row and multiple-row sub-queries

The SET Operators

- Describe the SET operators
- Use a SET operator to combine multiple queries into a single query
- Control the order of rows returned

Data Manipulation Statements

- Describe each DML statement
- Insert rows into a table
- Change rows in a table by the UPDATE statement
- Delete rows from a table with the DELETE statement
- Save and discard changes with the COMMIT and ROLLBACK statements
- Explain read consistency

DDL Statements to Create and Manage Tables

- Categorize the main database objects
- Review the table structure
- List the data types available for columns
- Create a simple table
- Decipher how constraints can be created at table creation
- Describe how schema objects work

Other Schema Objects

- Create a simple and complex view
- Retrieve data from views

- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

Control User Access

- Differentiate system privileges from object privileges
- Create Users
- Grant System Privileges
- Create and Grant Privileges to a Role
- Change Your Password
- Grant Object Privileges
- How to pass on privileges?
- Revoke Object Privileges

Management of Schema Objects

- Add, Modify and Drop a Column
- Add, Drop and Defer a Constraint
- How to enable and disable a Constraint?
- Create and Remove Indexes
- Create a Function-Based Index
- Perform Flashback Operations
- Create an External Table by Using ORACLE_LOADER and by Using ORACLE_DATAPUMP
- Query External Tables

Manage Objects with Data Dictionary Views

- Explain the data dictionary
- Use the Dictionary Views
- USER_OBJECTS and ALL_OBJECTS Views
- Table and Column Information
- Query the dictionary views for constraint information
- Query the dictionary views for view, sequence, index and synonym information
- Add a comment to a table
- Query the dictionary views for comment information

Manipulate Large Data Sets

- Use Subqueries to Manipulate Data
- Retrieve Data Using a Subquery as Source
- Insert Using a Subquery as a Target
- Usage of the WITH CHECK OPTION Keyword on DML Statements
- List the types of Multitable INSERT Statements
- Use Multitable INSERT Statements
- Merge rows in a table
- Track Changes in Data over a period of time

Data Management in Different Time Zones

- Time Zones
- CURRENT_DATE, CURRENT_TIMESTAMP, and LOCALTIMESTAMP
- Compare Date and Time in a Session's Time Zone
- DBTIMEZONE and SESSIONTIMEZONE
- Difference between DATE and TIMESTAMP
- INTERVAL Data Types
- Use EXTRACT, TZ_OFFSET and FROM_TZ
- Invoke TO_TIMESTAMP,TO_YMINTERVAL and TO_DSINTERVAL

Retrieve Data Using Sub-queries

- Multiple-Column Subqueries
- Pairwise and Nonpairwise Comparison
- Scalar Subquery Expressions
- Solve problems with Correlated Subqueries
- Update and Delete Rows Using Correlated Subqueries
- The EXISTS and NOT EXISTS operators
- Invoke the WITH clause
- The Recursive WITH clause

Regular Expression Support

- Use the Regular Expressions Functions and Conditions in SQL
- Use Meta Characters with Regular Expressions
- Perform a Basic Search using the REGEXP_LIKE function
- Find patterns using the REGEXP_INSTR function
- Extract Substrings using the REGEXP_SUBSTR function
- Replace Patterns Using the REGEXP_REPLACE function
- Usage of Sub-Expressions with Regular Expression Support
- Implement the REGEXP_COUNT function

Course 4

Power BI

Introduction to Power BI

Learning Objectives: In this module, you will be introduced to what Power BI is, why to choose power BI, its building blocks, other various fundamental concepts of Power BI

Topics Covered:

- What is Power BI?
- Why Power BI?
- Benefits of Power BI

- Building Blocks of Power BI
- Fundamental Concepts of Power BI

Power BI Desktop

Learning Objectives:

In this module you will be introduced to Power BI Desktop, software installation and overview of software

Topics Covered:

- Software Installation Procedures and Guidelines
- Overview of Software
- Power BI Sign UP
- Introduction to Tools and Terminologies
- Refreshing Power BI Service Data
- What is a Dashboard?
- What is a Report?
- How to share Dashboard and Report?

Data Source Connection and Data Transforming

Learning Objectives:

In this module you will be introduced to how to connect to a data source, perform cleaning and transformation of data

Topics Covered:

- Connecting to a Data Source
- Upload a local CSV File
- Connect to Excel Data
- What is a Query Editor?
- Import Data vs Direct Query
- Data Cleaning and Data Transformation
- Merging and Appending

Hands-on:

Datasets will be provided for practicing how to load and perform cleaning and data transformation.

Modelling using Power BI

Learning Objectives:

In this module you will be introduced to data modelling, how to manage relationships, creating calculated columns, measures and quick measures

Topics Covered:

- Modelling of Data
- Manage Data Relationship
- Cardinality, Cross Filtering
- Default Summarization and Sort By
- Creating Calculated Columns
- Creating Quick Measures and Measures

Hands-on:

In this you will be given hands-on to work on datasets, create calculated columns, manage relationships etc.,

Learning Objectives:

In this module you will be introduced to DAX

Topics Covered:

- What is DAX?
- Why is DAX Important?
- DAX Syntax
- Data Types in DAX
- Functions in DAX
- Measures in DAX
- Operators in DAX
- Tables and Filtering in DAX
- Queries in DAX
- Parameter Naming in DAX

Hands-on:

In this module hands-on will be given on various DAX functions

Data Visualization

Learning Objective

In this module you will be introduced to what is data visualization, importance of data visualization, creating charts using Power BI

Topics Covered:

- Creating Visualizations
- Colour Formatting
- Sort Order
- Scatter plot and Bubble Charts
- Tooltips
- Slicers
- Cross Filtering, Highlighting
- Report Level Filters
- Drill Down and Drill Up
- Hierarchies
- Conditional Formatting, Tables, and Matrices
- KPI's
- Cards and Gauges
- Map Visualizations
- Custom Visuals
- Grouping and Binning
- Selection Pane, Bookmarks & Buttons
- Z-Order

Hands-on:

In this module hands-on will be given on visualization, colour formatting, slicers, filters, grouping, selection pane etc.,

Reports and Dashboards

Learning Objectives:

In this module you will be introduced to modify reports and dashboards, ask questions to Power BI Q&A

Topics Covered:

- Modify and Print a Report
- Rename and delete report pages
- Add a filter to a page or report
- Set visualization interactions
- Print a report page
- Send a report to PowerPoint
- Create a Dashboard
- Create and manage dashboards
- Pin a report tile to a dashboard
- Pin a live report page to a dashboard
- Pin a tile from another dashboard
- Pin an Excel element to a dashboard
- Manage pinned elements in Excel
- Add a tile to a dashboard
- Build a dashboard with Quick Insights
- Set a Featured (default) dashboard
- Ask Questions about Your Data
- Ask a question with Power BI Q&A
- Tweak your dataset for Q&A
- Enable Cortana for Power BI

Hands-on:

In this module hands-on will be given on how to add filters to reports, set interactions, create dashboards etc.,

Publishing and Sharing Reports

Learning Objectives:

In this module you will be introduced to how to publish and share your dashboards and reports, saving options.

Topics Covered:

- Introduction to Sharing Options
- How to Publish Report From Power BI Desktop?
- How to Publish Report to Web?
- How to Share Dashboards Using Power BI Service?
- What is Content Pack?
- How to Save as PDF?

- What is Row Level Security?
- How to Export Data from Visualization?

Hands-on:

In this module hands-on will be given on how to share dashboard with Power BI service, how to save as PDF and exporting data from visualization

Course 5

Tableau

Tableau Course Material (Duration – 5 Hours)

- Start Page
- Show Me
- Connecting to Excel Files
- Connecting to Text Files
- Connect to Microsoft SQL Server
- Connecting to Microsoft Analysis Services
- Creating and Removing Hierarchies
- Bins
- Joining Tables
- Data Blending

Module 2

Learn Tableau Basic Reports

- Parameters
- Grouping Example 1
- Grouping Example 2
- Edit Groups
- Set
- Combined Sets
- Creating a First Report
- Data Labels
- Create Folders
- Sorting Data
- Add Totals, Sub Totals, and Grand Totals to Report

Module 3

Learn Tableau Charts

- Area Chart
- Bar Chart
- Box Plot
- Bubble Chart
- Bump Chart
- Bullet Graph
- Circle Views
- Dual Combination Chart

- Dual Lines Chart
- Funnel Chart
- Traditional Funnel Charts
- Gantt Chart
- Grouped Bar or Side by Side Bars Chart
- Heatmap
- Highlight Table
- Histogram
- Cumulative Histogram
- Line Chart
- Lollipop Chart
- Pareto Chart
- Pie Chart
- Scatter Plot
- Stacked Bar Chart
- Text Label
- TreeMap
- Word Cloud
- Waterfall Chart

Module 4

Learn Tableau Advanced Reports

- Dual Axis Reports
- Blended Axis
- Individual Axis
- Add Reference Lines
- Reference Bands
- Reference Distributions
- Basic Maps
- Symbol Map
- Use Google Maps
- Mapbox Maps as a Background Map
- WMS Server Map as a Background Map

Module 5

Learn Tableau Calculations & Filters

- Calculated Fields
- Basic Approach to Calculate Rank
- Advanced Approach to Calculate Ra
- Calculating Running Total
- Filters Introduction
- Quick Filters
- Filters on Dimensions
- Conditional Filters

- Top and Bottom Filters
- Filters on Measures
- Context Filters
- Slicing Filters
- Data Source Filters
- Extract Filters

Module 6

Learn Tableau Dashboards

- Create a Dashboard
- Format Dashboard Layout
- Create a Device Preview of a Dashboard
- Create Filters on Dashboard
- Dashboard Objects
- Create a Story

Module 7

Server

- Tableau online
- Overview of Tableau Server
- Publishing Tableau objects and scheduling/subscription

Course 6

Python

Introduction to Python

Learning Objectives:

In this module, you will get a basic understanding of python programming, Virtual environment, Package manager, version differences of python programming and detailed knowledge about the python installation and environment setup for working with python

Topics Covered:

- Python programming history & features
- Python compiler and IDE installation
- Virtual Environment
- Pip – Package Manager

Hands-on:

How to set up an environment for python development

Basics of Python:

Objectives:

In this module, you will get a basic understanding of python Syntax and a detailed understanding of Input/Output [I/O] operations, Variables, Operators Datatypes and Data

structure.

Topics:

- Python Syntax Overview, Indentation, comments
- Variable declaration
- Datatypes and data structure
  - Primitive
  - Non-primitive
- Operators in python

Hands-on:

How to write a basic Python code, variable declaration datatypes, and operators usage.

Program flow/ Data flow of Python:

Objectives:

In this module, you will get a detailed understanding of conditional statements, looping, control statements of python.

Topics:

- Conditional Statements
  - if statement
  - if ... else statement
  - if ... elif... else statement
- Looping
  - for loop
  - for with else statement
  - while loop
  - while with else statement
- Control Statements
  - break
  - Continue
  - pass
- Assert Statement

Hands-on:

How to use conditional, looping and control statements in python

Function in Python:

Objectives:

In this module, you will get a detailed understanding of writing function, the scope of variables, function with arguments, keyword arguments, lambda functions and Modules in python.

Topics:

- Syntax of Function
- Function with *args & **kwargs
- Scope of variables
- Lambda function with map, filter, reduce method

- DocString
- Modules and standard Modules

Hands-on:

How to create and use functions and different types of argument, lambda function, and modules in python.

File Handling in Python:

Objectives:

In this module, you will get a detailed understanding of file concepts like create, read, write, update, delete operation of file with python.

Topics:

- File Opening modes
- Context Manager in python
- File Operations
  - Open
  - Create
  - Read
  - Write
  - Update
  - Delete

Hands-on:

How to create and use file operation in python.

Exception Handling in Python:

Objectives:

In this module, you will get a detailed understanding of exception handling and creating your own exception classes in python.

Topics:

- Types of Errors in python
- Exception handling with
  - try ... except
  - try ... except... finally
  - try ... except... else
- Multiple Exception
- Raising Exception
- User-defined Exception

Hands-on:

How to create and use built-in and user-defined exception handling in python

Oops in Python:

Objectives:

In this module, you will get a detailed understanding of Object

Oriented Programming Concepts in python

Topics:

- Oops Concepts with programming syntax
  - Class
  - Object
  - Polymorphism
  - Encapsulation
  - Inheritance
- Types of Methods in python

Hands-on:

How to use Object-oriented programming concepts in python.

Core Concepts in Python:

Objectives:

In this module, you will get a detailed understanding of iterators, generators, decorators, in python.

Topics:

- Iterator
- Generator
- Decorator

Hands-on:

How to use core concepts and application of core concepts in python.

Comprehension in Python:

Objectives:

In this module, you will get a detailed understanding of List, Dictionary comprehension and specialized sorts in python.

Topics:

- Comprehensions
  - List
  - Nested List
  - if statement
  - if ... else statement
  - Nested if ... else statement
- Dictionary
- Sorting
  - List
  - Dictionary

Hands-on:

How to use comprehensions and sorting in python.

Thread and DateTime in Python:

Objectives:

In this module, you will get a detailed understanding of multi-threading concepts, datetime module alone with sleep and execution of code

in python.

Topics:

- Terms in threading
  - Process
  - Thread
  - Multithreading
  - Time complexity
- Thread Life cycle
- Programming with Threading & Multithreading
- Synchronization
- Sleep and execution time of code
- DateTime module

Hands-on:

How to use threading and data time concepts in python.

Advanced data Structure/ collections in Python:

Objectives:

In this module, you will get a detailed understanding of advanced data structures in python.

Topics:

- Deque
- Namedtuple
- ChainMap
- Counter
- Ordered Dictionary
- Default Dictionary

Hands-on:

How to use advanced data structure in python.

MySQL with Python:

Objectives:

In this module, you will get a detailed understanding of SQL statements and database connection along with CRUD operation using python.

Topics:

- SQL statements & Operations
  - Create
  - Read
  - Update
  - Delete
- Python – SQL connector package installation
- Python with CRUD Operations
- Commit & Rollback
- SQL Related Exception Handling

Hands-on:

How to use and manipulate data in a database using python.

Network programming with Python:

Objectives:

In this module, you will get a detailed understanding of Network programming, Client & server concepts with python.

Topics:

- Terms and Basics of network programming
- The architecture of data transmission between sender and receiver using python
- Getting data from the remote server
- Client & Server-side programming

Hands-on:

How to use and networking module of python, data transmission between client to server and server to client python.

Regular Expression with Python:

Objectives:

In this module, you will get a detailed understanding of writing Regex with python.

Topics:

- Regex Syntax
  - Quantifiers
  - Metacharacters
  - Special Sequences
  - Sets
- Python re module
- Methods with regex usage

Hands-on:

How to use and write regex in python.

GUI programming with Python:

Objectives:

In this module, you will get a detailed understanding of developing the GUI application using the PyQt5 module with python.

Topics:

- Introduction
- Components and Events
- An Example GUI
- Widgets
- Layout Management
- Signals & Slots
- QMessagesBox, QDialog
- Database Handling

Hands-on:

How to develop a GUI application with PyQt5 and python.

API access with Python:

Objectives:

In this module, you will get a detailed understanding of accessing open APIs using python.

Topics:

- Google Text to Speech
- Google Speech to Text
- OpenWeatherMap

Hands-on:

How to use open APIs using python.

DataScience with Python:

Objectives:

In this module, you will get a Basic understanding of data science modules in python.

Topics:

- Pandas – Series and Dataframe
- Numpy
- Matplotlib

Hands-on:

How to use data science modules of python.

The project with Python:

Objectives:

In this module, you are going to develop an application for own scenario.

Topics:

- Creating own application with any one of the frameworks
  - Django App
  - PyQt5 App
  - Console oriented Core app

Course 7

AWS Solutions Architect Certification

Cloud Basics

This session deals with the basics of cloud computing. Significant features of the cloud when compared with on-premises. You will get a good understanding of the difference between public, private and hybrid cloud environments. discuss various cloud services like

- IAAS(Infrastructure As A Service)
- PAAS(Platform As A Service)

- SAAS(Software As A Service)

Introduction to AWS

Learning Objective:

Amazon web service is one of the leading cloud providers available in the market. AWS provides a variety of services for your business and helps you get through digital transformation for the future. You will be learning the AWS global infrastructure like Regions, Availability Zones and Edge Locations. Overview of services provided by AWS such as,

- Compute
- Storage
- Database
- Networking
- Security
- Applications

End of this session you will be having a good understanding of cloud concepts and its services and the Impact of AWS in a cloud environment.

Hands-on:

- Open AWS free tier account
- Setup payment methods and billing preferences.
- Set alarm for free tier usage

Virtual Private Cloud

Learning Objective:

Logically isolated network devices (instances) from other AWS resources called VPC. You can provide your own private IPs for your instances. Your instances inside VPC will be interconnected together through VPC. Basic components of VPC to create a basic infrastructure is follows

- VPC
- Subnets
- Route Tables
- Internet gateway

End of this session you will have clarity of AWS regions, Availability Zones, and Edge locations. Also, you will learn CIDR concepts to get a better understanding of IP ranges.

Hands-on:

- Create and configure VPC, Subnets, Internet gateway, and Route Tables.
- Create NAT Gateway, NAT instances, VPC Peering, Endpoints.
- Different between NACL and Security groups

EC2

Learning Objective:

EC2 provides a scalable computing capacity for your business. AWS has a wide range of instance family (type) include Memory-optimized, CPU optimized, Networking, etc. You can create instances using Amazon Machine Images, which is preconfigured by Amazon. AWS lets you create your own AMI and you can choose from any AMI available in Amazon Marketplace as well. Instances are available in many options,

- On-demand
- Reserved
- Spot Instance
- Scheduled instance

As a solution Architect, you will be able to give a solution for your client to choose the perfect compute service for their business needs.

Hands-on:

- Create and launch different types of operating systems like Linux, Windows and connect them.
- Create AMIs and Snapshots and launch instances using them.
- Create additional Volume and attach it with your instance.

Storage

Learning Objective:

There are many storage options available in AWS as per your needs from short term to long term. In Amazon S3 you can store an unlimited amount of data. S3, EBS, EFS, FSx, Glacier, and DeepGlacier are some major storage options available in AWS. In this session, you will be learning storage classes available in S3 and its features, cost, etc. You will get a brief knowledge of storage classes so that you can suggest your client more cost-effective. Storage classes are,

- Standard
- Standard Infrequent Access
- Standard Intelligent Tier
- S3 Glacier
- S3 Glacier Deep

Hands-on:

- Create and attach EFS with instances

- Create S3 and apply lifecycle policy and replicate the bucket into another bucket.
- Create static Webhosting

Load balancing and Autoscaling

Learning Objective:

Load balancing and Autoscaling are the significant features available in a cloud environment. A load balancer is to split the traffic between servers and trigger the auto- scaling when needed. The load balancer keeps checking the server's health in a proper time interval and takes the action according to it. There are three types of load balancers available,

- Classic Load balancer
- Application Load balancer
- Network Load balancer

End of this session you will understand the load balancer concept. You will have an idea to use a suited load balancer for your application.

Hands-on:

- Create a Load balancer and attach targeted instances into it.
- Create an auto-scaling group and increase the instances when CPU utilization is high, and decrease the instances when CPU utilization is low.

Route 53

Learning Objective:

Route 53 is a DNS service available in AWS. You can register your domain here. Create a recordset to host your website or application. Understand the routing policies available in AWS and apply which is suitable for your environment. Routing policies are

- Simple
- Weighted
- Geological
- Latency
- Failover

Hands-on:

- Register your Domain name
- Create recordset and apply a routing policy
- Configure Health check for your Load balancer or instance.

Cloud Front

Learning Objective:

Cloud front is also called Content Delivery Network. Cloud front creates a distribution (cache) for your website or Application at your nearest edge location. So the latency would be less for the next time user. You can block a particular country people to view your website. Analyze

your website views from which OS, Browser, and users in this session you will be engaged into the following topics,

- Origins and Origin groups
- Behaviors
- Restrictions
- Invalidations

Hands-on:

- Create distribution for your website. Block a few country users viewing your website. Invalidate the previous cache and create a new one.

IAM

Learning Objective:
IAM is to control your AWS resources most securely by limiting AWS users and other Services. You will be learning policies and the role and their major impact on the resources. Configure password policies and activate MFA. In this session, you will have knowledge on,

- Users
- Groups
- Roles
- Polices

Hands-on:

- Create users and add a user to the group.
- Attach the customized policy to that group.
- Perform cross-account access using STS

Relational Database Service

Learning Objective:
RDS is a SQL based fully managed Database service. Users don't need to worry about storage scaling, patching, backups, and maintenance. Replication costs you less and implementation is simple. RDS supports the following database engine,

- Aurora
- MySQL
- MsSQL
- MariaDB
- PostgreSQL
- Oracle

Hands-on:

- Create a database with replication on another Availability zone. Configure auto-scaling, daily backup, and auto-upgrade.

- Connect your database through database client and insert tables and contents into it. Apply some quires to retrieve data.

DynamoDB

Learning Objective:
DynamoDB is a NoSQL database service available in AWS. It is a replacement for MongoDB. It can handle 20 million requests per second and also can handle over 10 trillion requests per day. In-memory caching, Backup and restore are the significant features of DynamoDB. They are mainly used for gaming applications and IoT Applications. You will be learning the following topics,

- Scaling through performance
- Server less environment
- Microservices

Hands-on:

- Create and insert contents into the DynamoDB table. Configure and manage multi- region replication.

Monitoring (Cloud Trail & Cloud Watch)

Learning Objective:
Cloud trail keeps the logs for every activity happening into your AWS account. It does have the last 90 days activity by default. In this session, you will be learning the different types of events available in the cloud trail and its example.

- Management event
- Data event
- Insight event

Cloud Watch

Learning Objective:
Cloud Watch is monitoring to fetch the logs and perform some action accordingly. There are two types of monitoring optionss available. Basic and detailed monitoring. You will learn to create logs and metrics and events. It triggers some action when event occurs.

- Events
- Logs
- Metrics
- Alarms

Hands-on:

- Create a cloud watch event to start a new instance when CPU utilization is high.
- Set alarm for the events and send notification

Application Services

Learning Objective:
There are many application services available in AWS. SNS is the most

commonly used application service. Simple Notification Services is to generate email notification and send it to the subscribers. Another application service we use is SQS. It is a replacement for the Microsoft queuing service. Application services covered in this session are as follows,

- Simple E-mail Service
- Simple Queue Services
- Simple Notification Service

Hands-on:

- Create and send notification to the users
- Create and send messages using standard and FIFO messaging queue

Design and Architecture

Learning Objective:

As a solution Architect you will be able to give a solution for your client to create, implement and improve your cloud infrastructure by using the five pillars of well architect tools.

- Operational excellence
- Reliability
- Security
- Cost optimization
- Performance efficiency

Professional aptitude

- Technical Skills
- Soft Skills
- Work Ethic
- Professionalism
- Critical Thinking and Problem-Solving
- Adaptability and Flexibility
- Digital Literacy
- Networking and Relationship Building

Skills to Master

- SQL
- Data Wrangling
- Data Analysis
- Prediction algorithms
- Data visualization
- Time Series
- Machine Learning
- PowerBI
- Advanced Statistics
- Data Mining
- R Programming

Tools to Master

R   Excel   SQL

Power BI   PRESTO   python

KNIME   aws   tableau

Course **Projects**

| Healthcare | Banking and Finance | eCommerce |

Analysis of Patient Data (Healthcare)

This project requires learners to analyze the patient data of those suffering from different diseases across various summaries. The facility, chain organizations, and dialysis stations analysis is required to be carried out where the patients are undergoing dialysis. The project also focuses on the payment mode aspect wherein if any discounts or reduction in payments have happened then those are analyzed.

Loan of Customers (Banking and Finance)

In this project, learners analyze the loan given by a financial institution to different customers of varied grades and sub-grade levels. The analysis needs to consider the loan disbursement reasons, funded amount, and revolving balance values for every customer in different states and geolocations. The project requires the customers payment modes and the last payment values.

Olist Store Analysis (eCommerce)

The market for a certain product is analyzed by considering a particular retail outlet which sells these products. The project involves statistical analysis on the payment distribution from different customers with the different modes of transactions across different product categories. The feedback from customers with respect to shipping days and other factors also needs to be considered while carrying out the analysis.

Meet the Batch

Industries Our Learners Come From

- 12% - BFSI
- 5% - Healthcare
- 10% - Consulting
- 6% - Others
- 17% - BPO/ KPO
- 50% Information Technology

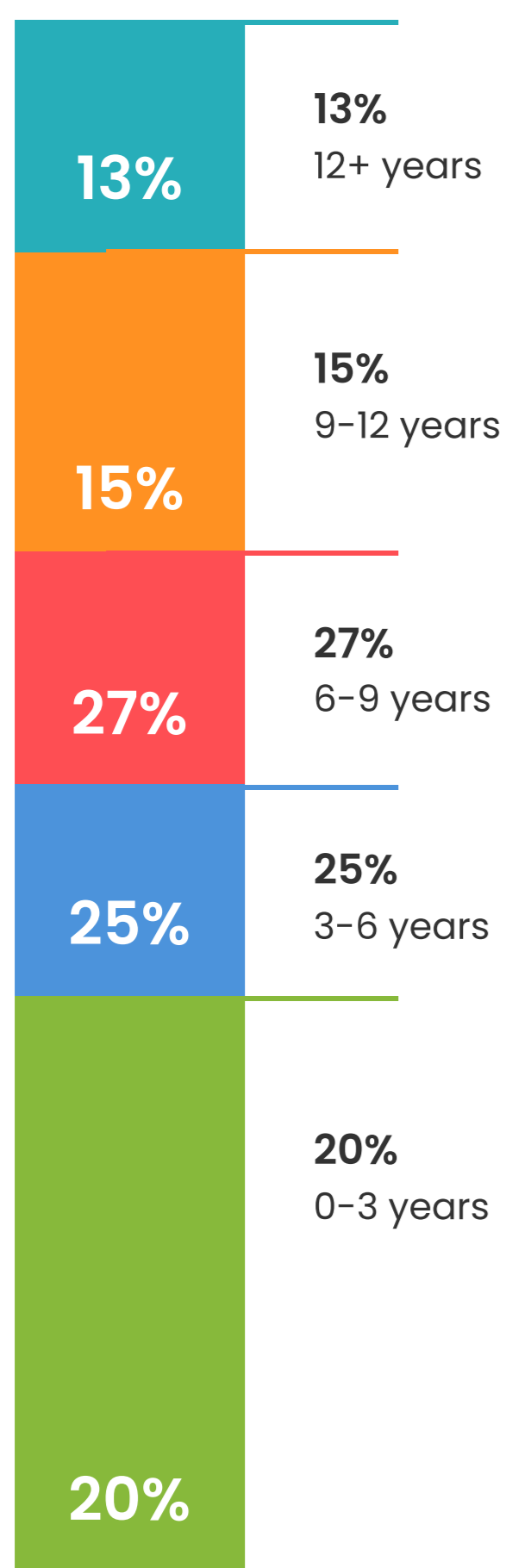# Work Experience

- 13% — 13% 12+ years
- 15% — 15% 9-12 years
- 27% — 27% 6-9 years
- 25% — 25% 3-6 years
- 20% — 20% 0-3 years
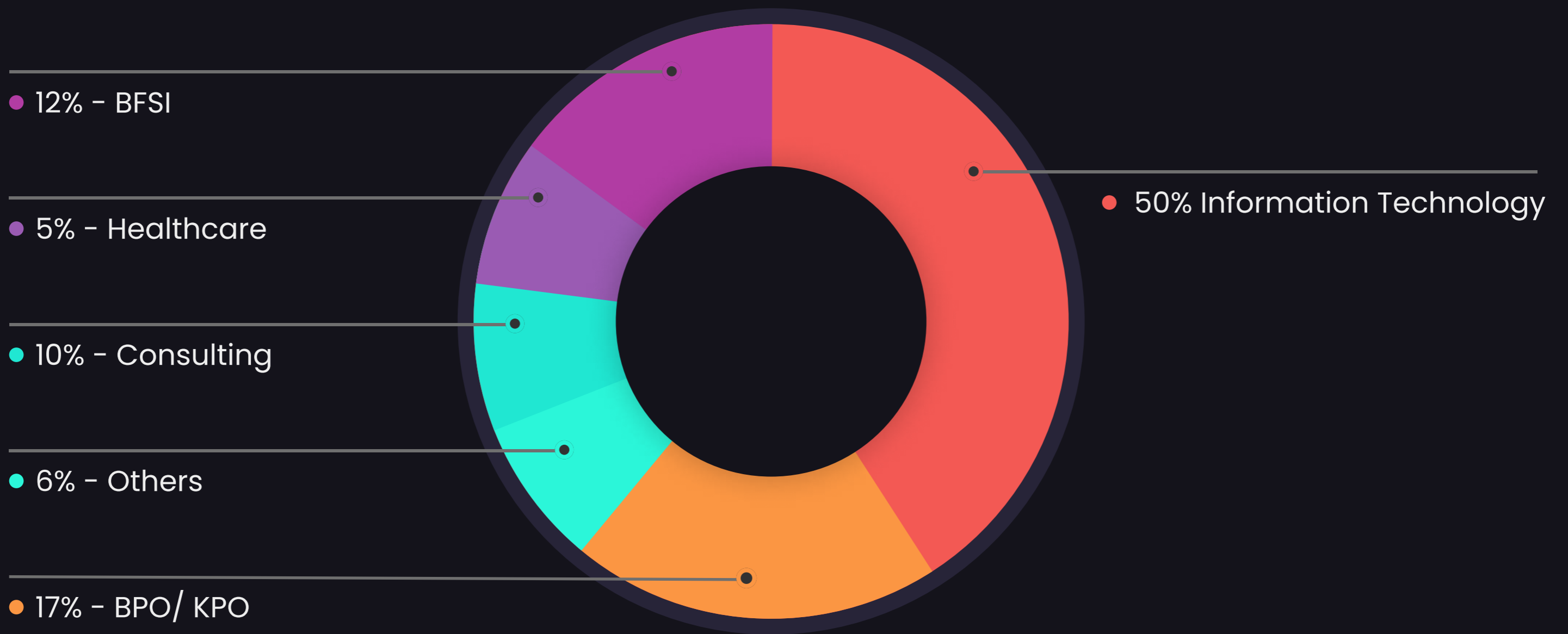
Some of their current employers include

amazon

citi

Capgemini

BOSCH

pwc

EY

accenture

Adobe

TATA CONSULTANCY SERVICES

vmware

Abbott

DELL

Glimpse of our
Successful Transitions

indeed	**glassdoor**	**AmbitionBox**
4.5 ★★★★☆	4.7 ★★★★☆	4.0 ★★★★☆

Career **Transitions**

		From	To	
Vichitran Data Analyst		**M.Tech (Mech)**	**Data Analyst**	**tcs**
Praveen Kumar Analyst Business Consulting		**B.com**	**Analyst Consulting**	**>**
Baisakhi Nayak Associate Data Operation		**B.Sc (Maths)**	**Data Operation**	**Tiger Analytics**
Jagan Kumar Data Analyst		**BE (Mech)**	**Data Analyst**	**NIQ**
Preethi Data Analyst		**B.E (ECE)**	**Data Analyst**	**amazon**
Abdu Hamith Data Analyst		**B.com (CA)**	**Data Analyst**	**cognizant**
Deepika Data Analyst		**B.E (Civil)**	**Data Analyst**	**EXL**
Jenish Data Analyst		**B.E (Mech)**	**Data Analyst**	**Ganit** data speaks

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Offering one-on-one counseling sessions to discuss career goals, aspirations, and challenges.

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Providing guidance on building a strong personal brand and online presence within the IT community.

Networking Assistance
Offering guidance on leveraging social media platforms like LinkedIn for professional networking.

Interview Preparation
Conducting mock interviews to practice common technical and behavioral interview questions

Skill Development and Training
Tailoring skill development plans based on current industry trends and job market demands.

Transition Support and Career Advancement
Offering mentorship programs and opportunities for professional growth and advancement within the IT industry

Learner **Reviews**

S **Sana**
Senior Developer Level 3 at Capegemini

Hi, I completed my Data Science Masters Program training in Besant Technologies, Besant Technologies has provided me better training and infrastructure. My trainer is a real-time consultant and the training given by him is really Fabulous.

A **Anu**
Junior Data Scientist at DXC Technologies

Hi all, Want to share my experience in Besant technologies. I completed my Data Science Masters Program courses in Besant technologies. I got placed in HCL Chennai. They purely concentrate on quality training.

H **Harish**
Senior Data Scientist at HCL Technologies

Besant technologies is the best training center for Data Science Masters Program. I did the Data Science Masters Program course in besant technologies. Training is Really good for inautix Employees. 100% practical one and we can clear any type of Data Science interview.

About **Besant Technologies**

About **Besant Technologies** Being the leader in IT Software Training sector Besant Technologies holds the best and inevitable place in short time. To manage a company is a social process that processes consist of planning, control, co-ordination and motivation. Based on this our Besant Technologies Chennai & Besant Technologies Bangalore is a well-planned one. We are having the co-ordinators in dealing with all the subjects, lectures, problems and conclusions.

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- Experienced MNC Professionals
- Corporate Style Training
- Syllabus Based on Companies
- Placement Oriented Courses
- Projects for Every Course
- Own Prepared Materials

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- Siruseri
- Maraimalai Nagar

Bangalore Location

- BTM Layout
- Marathalli
- Rajaji Nagra
- Jaya Nagar
- Kalyan Nagar
- Electronic City
- Indira Nagar
- HSR Layout
- Hebbal

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