

## PROFESSIONAL COURSE IN DATA ANALYTICS

### INTRODUCTION TO DATA ANALYSIS AND

#### ADVANCE EXCEL

- Introduction to data analysis
- Basics excel
- if and nested if formulas with AND, OR functions
- Sumifs, countifs, maxifs, minifs, average ifs
- dsum, dmax, dmin, daverage, dcount, sumproduct
- lookup formulas and index match formula
- interest calculation(PMT,IPMT, PPMT )
- Text and date functions
- filtering and sorting ( adv filtering) and conditional formatting
- graphs, pivot table and pivot chart
- what if analysis , Goal seek
- forecasting using formula and sheet
- data validation, macros and printing using diff format
- Power Query in excel

### POWER BI FOR DATA ANALYSIS

- Introduction to Power BI desktop and Installation power BI desktop
- Connecting datasheet , Excel, CSV, Web, Sql
- Transformation basic and Power query editor
- Filtering, sorting, removing duplicate, Merging and appending queries
- Column splitting, formatting and Create custom columns
- Relationship between tables , Primary keys and foreign keys
- Star vs snowflakes schema and Creating data model
- Calculate columns vs measures
- Introduction to DAX , Dax functions and Time intelligence Functions and more..
- Building dashboard using charts, maps, tables, slicers
- Conditional formatting and filters and drill throughs
- Custom visuals from Marketplace
- Sales data analysis Financial KPI
- HR and Employee data insights
- HR analytics Dashboard and Sales Dashboard creation

### PYTHON FOR DATA ANALYSIS

- Python introduction and basics
- Datatypes, variables, operators, if else statement, iterative statements
- List, tuple, sets, dictionaries, strings and functions related to these structures
- Functions and scope
- Classes and objects , constructor, inheritance, polymorphism, encapsulation, abstraction
- Modules and packages using basic packages
- Module - math , random, datetime, os,json, requests, urllib
- File handling with json and normal files both
- Numpy module – array filtering and statistics
- Pandas module – dataframe , filtering , statistics and more..
- Matplotlib module – plotting graphs , Scipy module
- Seaborn Module – plotting data, heatmaps, pair plots, distribution plots
- Database programming with SQL and MONGODB
- Statistics basic – mean, median, mode variation, standard deviation, correlation
- AI exposure with scikit-learn , jupyter notebook, Tensor flow and hugging face.