GAMAKA

Artificial Intelligence Solutions

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Table of Contents

I. **Introduction** 2

- About US
- Target Audience
- Program Structure
- Program Flow
- Data Science Process
- Projects/Case Studies
- Impact of Data Science

II. **What You Get!!!** 7

- Course Completion Certificate
- Internship Certificate
- Advantages of joining GAMAKA AI

III. **Struggling to Get a Job?** 11

- Industry Recruitment Challenge
- Strategies to get a job
- Trainer Role
- Our Students Placed Companies

IV. **Syllabus** 13

- Python - Basic & Advanced
- Database (Sql Server/Oracle)
- Excel
- Statistics, Machine Learning, Data Visualization, Data Science, AI with Python Track
- Tableau
- Power BI
- Mongo DB

Introduction

About US

- Gamaka AI is a leading High-End Training on Emerging Technology and Placement company in India managed by IT veterans with more than a decade experience in leading MNC companies.
- We are known for our practical approach towards trainings that enable students to gain real-time exposure on competitive technologies. Trainings are offered by employees from MNCs to give a real corporate exposure.

Target Audience

- Freshers from BCA, BCS, BE, BTech, MTech, MCA. MCS
- Final Year/Internship projects for BCA, BCS, BE, BTech, MTech, MCA. MCS
- Non-IT Professionals who've worked mostly with tools like Excel and want to learn how to use R for statistical analysis.
- Business Analyst
- IT Project Managers
- MBA Graduates or business professionals who are looking to move to a heavily quantitative role.
- Engineering Undergraduate/Graduate/Professionals who want to understand basic statistics and lay a foundation for a career in Data Science

No Prior Programming/Coding Skills Required

Program Structure

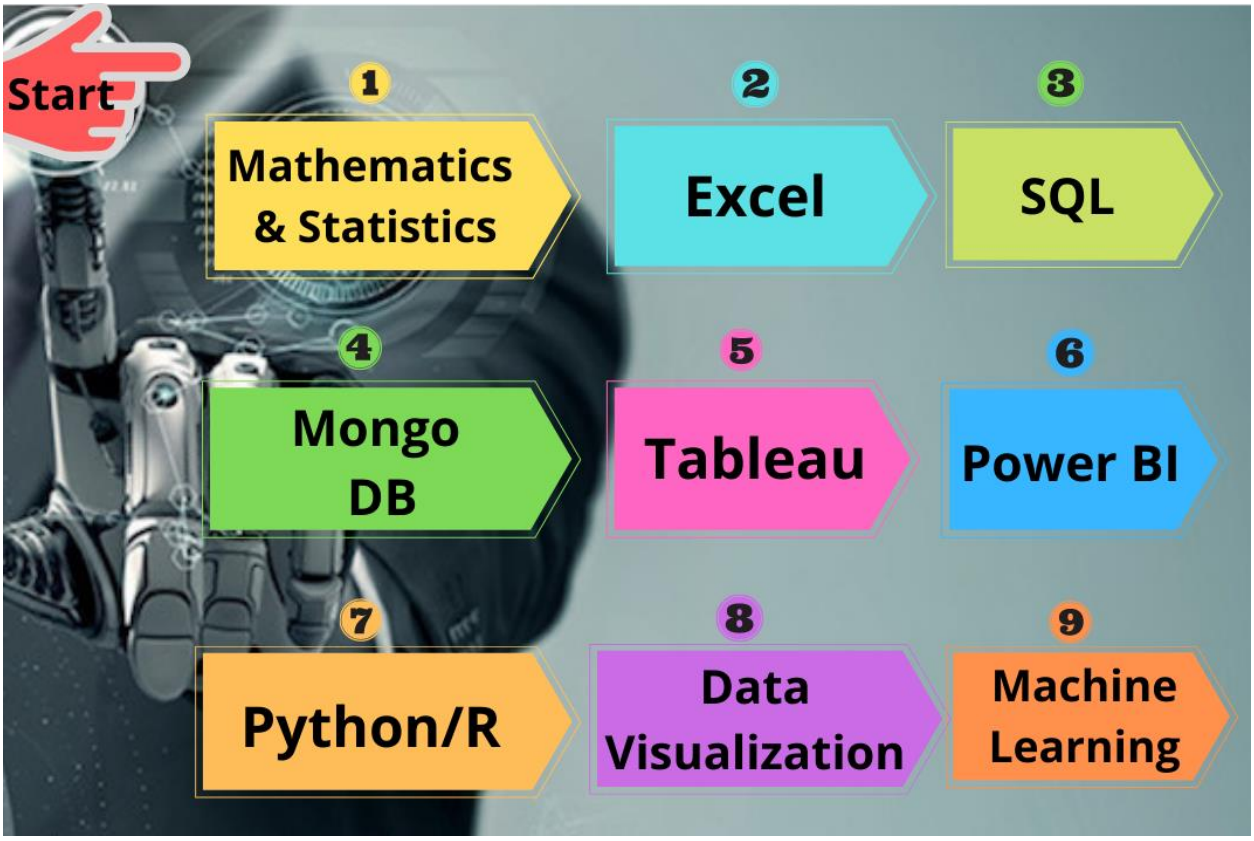
- **Statistics**
- **Excel**
- **SQL**
- **Mongo DB**
- **Tableau**
- **Power BI**
- **Python/R**
- **Data Visualization**
- **Machine Learning**
- **15 Projects**
- **Internship – 3 months (Internal/Tie-ups)**

Interview Preparation, Resume Building, GIT Profile, 100% Placement Assistance, Projects

Note: Separate batch & additional 1-month extra sessions for NON-IT Professionals to build strong programming skills from scratch.

Duration: 4 Months / 250+ hours. For NON-IT: 6 Months

Program Flow



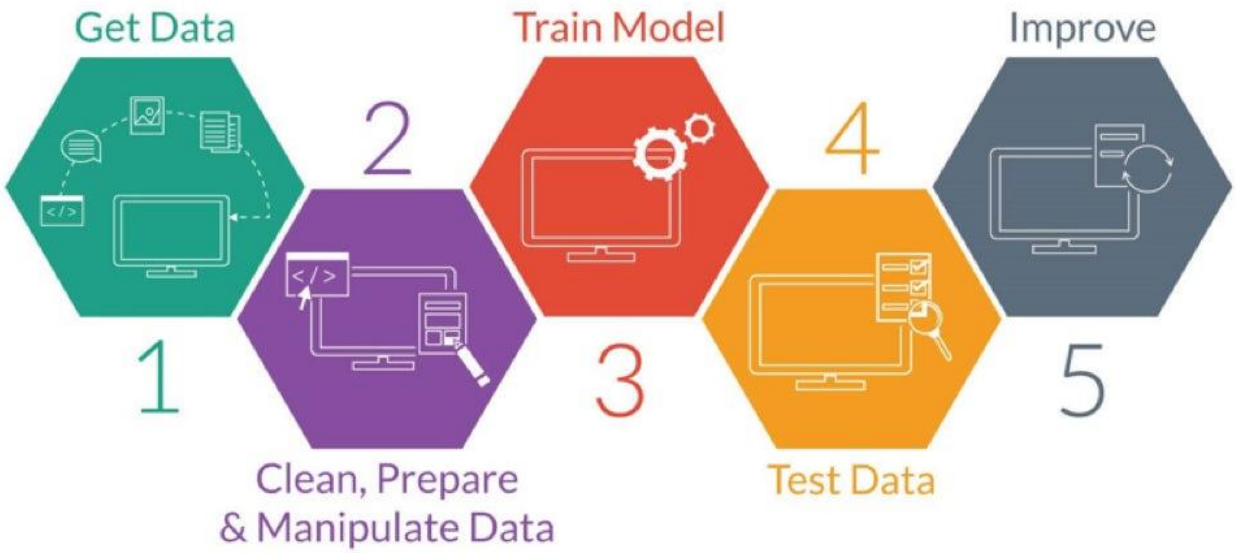
***Most suitable for Managers, Business Leaders, CTO, Team Leaders, Quality Analyst, Software Testers, Business Analyst, Subject Matter Experts, Domain Experts from Mechanical, Electrical, Finance, Banking, Hospitality, Healthcare, Manufacturing, SCM, CRM, Sales, Marketing, etc.**

***No Technical Background Required.**

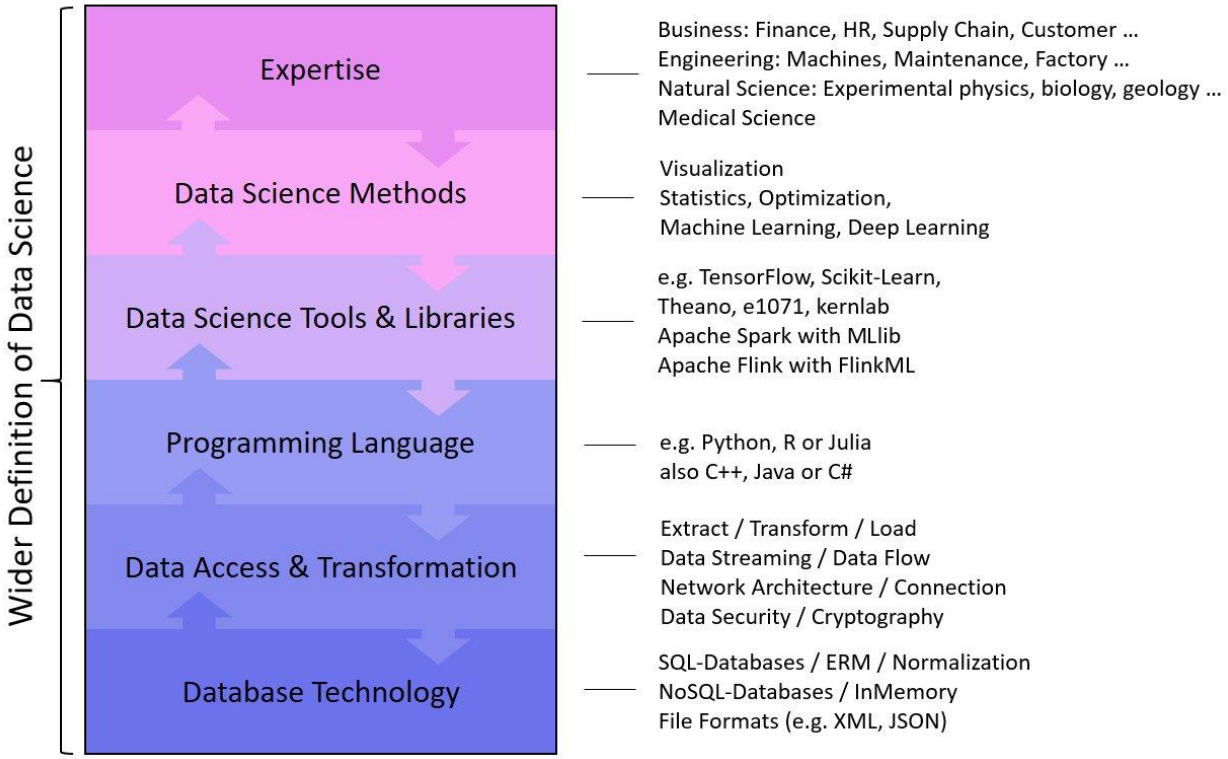
Certification Course in Business & Data Analytics(with Internship) is designed for Subject Matter Experts to upgrade, understand, apply Data Science & AI emerging technologies in their respective domains.

- **Discover various ways of analyzing and visualizing your organization's data with dashboards**
- **Learn about exciting topics included in machine learning, such as clustering, time series prediction, natural language processing, deep learning, and explainable AI**
- **Cover the essential concepts of data science, such as data science workflow, and how data can be applied to real-world business problems**

Data Science Process



Data Science Knowledge Stack



Projects/Case Studies

- Sales Dashboard
- Product Analysis
- Customer Analysis
- Used Car sales analysis
- Zomato sales analysis
- Shopping List/Order using excel

Impact of Data Science

What You Get!!!

Course Completion Certificate

Will I get certified?

Upon successful completion of this data science course, you'll earn a Certificate. The certificate adds the required weight in any portfolio.

Internship Certificate

This certificate will be issued to those pursuing internships with our development team or clients with whom we have tie-ups. Data Science Internship gives opportunity to learn from professionals, gain practical experience in this field, and build a robust professional network.

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09-Dec-2021

INTERNSHIP EXPERIENCE LETTER

This is to certify that Mr. Darshil Doshi was working with Gamaka AI as Trainee Data Analyst on Internship.

Date of Joining	05 Oct 2021.
Date of Completion	06 Dec 2021.
Designation at the time of Leaving	Data Analyst Intern

Scope of Work:
Worked as a Data Analyst Intern in our IT development & consulting division.

His job responsibilities were as follows:

- Interpreting data, analyzing results using statistical techniques.
- Developing and implementing data analyses, data collection systems and other strategies that optimize statistical efficiency and quality

Tools & Technologies Used:

- Anaconda Navigator 2019, Jupyter Notebook 6.0
- Python 3.8, NumPy, SciPy, SciKit Learn, Panda, Matplotlib
- Mathematics, Statistics, Machine Learning – Supervised/Unsupervised
- Deep Learning – Neural Network, TensorFlow

We found him sincere, hardworking & responsible.

We wish him all the success in his future endeavors.

Yours faithfully,
Mahesh Kaneri
Director

Note: The document does not carry signature due to COVID-19 situation

Advantages of joining GAMAKA AI

- Instructor led online & classroom interactive sessions
- One-To-One online problem-solving sessions
- Complete Soft Copy of Notes & Latest Interview Preparation Set
- Trainers are working IT professional with top IT MNC's
- 100% Placement Assistance
- Resume Building & Mock Interview Sessions
- 100% Hands-on Training with Live Projects/Case Studies
- Internship & Course Completion Certificate
- 1 Year free subscriptions to Portal for Updated Guides, Notes, POC, Projects & Interview preparation set.
- Extensive training programs with Recorded Sessions
- 24*7 Support on enquiry@gamakaai.com

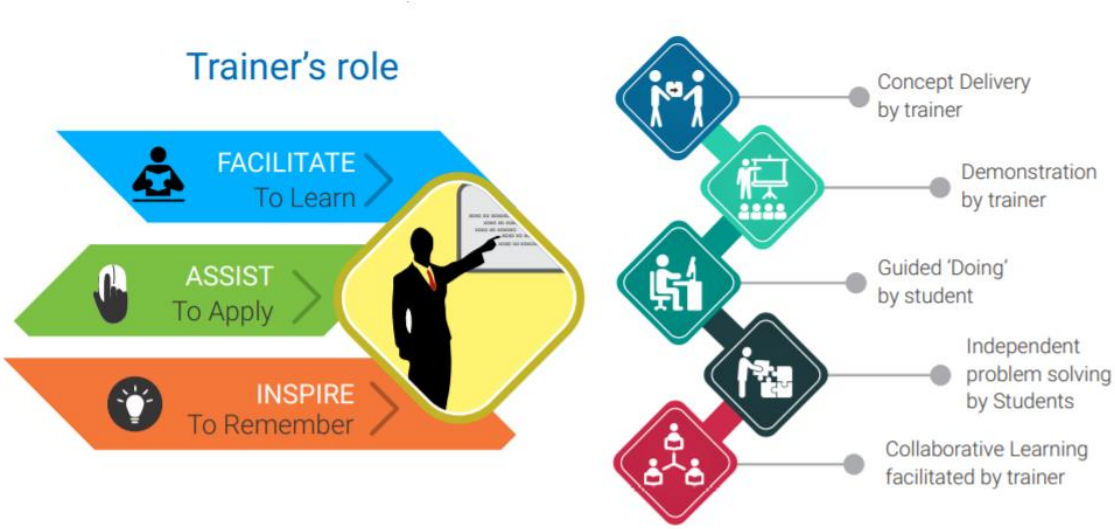
Struggling to Get a Job?

Industry Recruitment Challenge

Strategies to get a job

- Gain Industry Expertise, Internship Experience.
- Presentation skills & Grooming to face challenging interview
- Work on Industrial Projects/Case Studies
- Professional Resume & GIT Profile
- Interview Preparation with Mock Interviews
- Job Assistance & Placement

Trainer Role



Our Students Placed Companies

Python - Basic & Advanced

Duration: 40+ Hours with hands on tutorials, 5 Case Studies with Internship

Introduction & Setup

- What is Python and history of Python?
- Why Python and where to use it?
- Discussion about Python 2 and Python 3
- Set up Python environment for development
- Discuss about IDE's like IDLE, Pycharm and Enthought Canopy
- Discussion about unique feature of Python
- Introduction to Anaconda Distribution
- What is Anaconda Distribution?
- How to install Anaconda?
- conda repository
- Anaconda Navigator
- pip and conda to get new package
- pip and conda commands
- set Virtual

Scripting

- First "Hello World" Python Program
- Start programming on interactive shell.
- Using Variables, Keywords
- Interactive and Programming techniques
- Comments and document interlude in Python

Functional Programming

- Python Core Objects and built-in functions
- Number Object and operations
- String Object and Operations
- List Object and Operations
- Tuple Object and operations
- Dictionary Object and operations
- Set object and operations
- Boolean Object and None Object
- Different data Structures, data processing
- Map, Filter & Reduce
- List Comprehension
- Generators & Yields

Conditional Statements and Loops

- What are conditional statements?
- How to use the indentations for defining if, else, elif block
- What are loops?
- How to control the loops, infinite loops
- How to iterate through the various object
- Sequence and iterable objects

UDF Functions and Object Functions

- What are various type of functions
- Create UDF functions
- Parameterize UDF function, through named and unnamed parameters
- Defining and calling Function
- Anonymous Functions - Lambda Functions
- String Object functions
- List and Tuple Object functions
- Dictionary Object functions

File Handling with Python

- Process text files using Python
- Read/write and Append file object
- File object functions
- File pointer and seek the pointer
- Truncate the file content and append dataFile test operations using os.path

Packages & Modules

- Python inbuilt Modules
- os, sys, datetime, time, random, zip modules
- Create Python UDM – User Defined Modules
- Define PYTHONPATH
- Create Python Packages
- init File for package initialization

Exceptional Handing and Object Oriented Python

- Python Exceptions Handling
- What is Exception?
- Handling various exceptions using try....except...else
- Try-finally clause
- Argument of an Exception and create self exception class
- Python Standard Exceptions
- Raising an exceptions, User-Defined Exceptions
- Object oriented features
- Understand real world examples on OOP
- Implement Object oriented with Python
- Creating Classes and Objects, Destroying Objects
- Accessing attributes, Built-In Class Attributes
- Inheritance and Polymorphism
- Overriding Methods, Data Hiding\
- Overloading Operators

Advanced Topics

- Decorators
- Managed Attributes
- Unicode & Byte String
- Metaclasses
- Generators
- Descriptors

Debugging, Framework & Regular expression

- Debug Python programs using pdb debugger
- Pycharm Debugger
- Assert statement for debugging
- Testing with Python using UnitTest Framework
- What are regular expressions?
- The match and search Function
- Compile and matching
- Matching vs searching
- Search and Replace feature using RE
- Extended Regular Expressions
- Wildcard characters and work with them

Database interaction with Python

- Creating a Database with SQLite 3,
- CRUD Operations,
- Creating a Database Object.
- Python MySQL Database Access
- DML and DDL Operations with Databases
- Performing Transactions
- Handling Database Errors

Python Libraries

- Numpy
- SciPy
- Stats Model
- Pandas

Database (Sql Server/Oracle)

Duration: 40 hours with hands on tutorials

Syllabus:

- DDL, DML, RDBMS
- CODD Rule
- Query
- Insert Delete Update
- Table
- Table Join
- Data Types
- Set Operations
- Constraints
- Sub query
- Aggregate Functions
- Date Functions
- Math Functions
- String Functions
- Data Convert Functions
- Analytical Functions
- Sequence Identity
- View
- Index
- Cursor
- Transact SQL
- Normalization & De-normalization
- Procedure Function(PLSQL)
- Trigger
- Transaction(ACID)
- XML in SQL
- System Functions
- System Settings
- System Tables Views
- User Role/Security

Excel

Duration: 20 hours with hands on tutorials

Syllabus:

- Learn about Excel tables and what is their advantage over regular ranges.
- Use a table to filter, sort and see totals.
- See how calculations can be used to add columns to the existing data in Excel table.
- Create our first pivot table.
- Use multiple pivot tables and pivot charts to create our first dashboard.
- Connect multiple slicers to the pivot tables.
- Explore in more depth the full power of pivot tables.
- See how to filter the data shown in the pivot in many ways to achieve interesting subsets of the data.
- Use calculated fields on top of the pivot table to calculate
- Use formulas to aggregate the data as an alternative to pivot tables for more flexible reporting layouts.
- See how a pivot can use more than one table and introduction to the Excel data table that is described in detail in the more advanced course in these series.

Statistics, Machine Learning, Data Visualization, Data Science, AI with Python Track

Duration: 90 Hours with hands on tutorials, 3 Case Studies with Internship

Statistics

- Important statistical concepts used in data science
- Difference between population and sample
- Types of variables
- Measures of central tendency
- Measures of variability
- Coefficient of variance Skewness and Kurtosis

Inferential statistics

- Normal distribution
- Test hypotheses
- Central limit theorem
- Confidence interval
- T-test
- Type I and II errors
- Student's T distribution

Regression, Anova & Time Series

- Regression
- ANOVA
- R square
- Correlation and causation
- Time Series

Exploratory data analysis

- Data visualization
- Missing value analysis
- The correction matrix
- Outlier detection analysis

Basic fundamentals of machine learning technique below with real world examples

- Python Scikit tool
- Neural networks
- Support vector machine
- Logistic and linear regression
- Decision tee classifier

Tableau

Duration: 40+ Hours with hands on tutorials

Introduction

- What is Data Visualization?
- Scope of Data Visualization
- Tableau and its uses
- Scenario and Objectives
- Installation and Application
- Features and Architecture of Tableau
- Terminology and Definitions
- Tableau Work Space
- Files and Folders

Visualization Design and Data Types

- Defining Data
- Terminology of Data
- Types of Data
- Data Roles
- Dimension vs Measure
- Continuous vs Discrete
- Exporting Data
- Connecting Sheets
- Tableau Visualization Engine

Tableau and Data Connections

- Understanding Data Connections
- How to connect to Tableau Data Server?
- Data Connections: Joining and Blending
- Defining a Join
- Various Kinds of Join
- Usage of Join
- Right Outer Join
- Custom SQL Enabled
- Data Blending and Tableau
- Usage of Data Blending
- Data Blending in Tableau
- What is Kerberos Authentication
- Working of Kerberos Authentication

Data Organization

- Need to Organize Data
- How to Organize and Simplify Data
- What is Filtering
- How to Apply a Filter to a View?
- Filtering on Dimensions
- Totals and Sub totals
- Aggregating Measures
- Data Spotlighting
- Summary Card
- String Functions and Logical Functions
- What is Sorting
- How to Sort Data in Tableau
- Types of Sorting
- Combined Fields
- Group and Aliases
- Hierarchies
- Sets
- Tableau Bins
- Fixed Size and Variable Sized Bins
- Drilling
- Drilling Methods
- Aggregations

Formatting and Annotations

- Understanding Formatting and Annotations
- What is Spatial Analysis
- What is built-in Geocoding
- What is Custom Geocoding
- How to add Caption to Views?
- Adding Tooltips to Views
- Using Title Caption and Tooltip
- Formatting the Axes
- Edit Axis Option
- Formatting Window
- How to Format Mark Labels

Chart Types

- Objectives of Chart Types
- How to Use Dual Charts
- What is Dual Axis?
- Using Combination Charts
- How to Use Gantt Charts for Activity Tracking
- Using Motion Chart
- What are Box and Whisker Plots
- Using Reference Lines and Reference Bands
- What is Pareto Analysis
- What are Water Fall Charts
- How and What of Market Basket Analysis

Calculations

- Objectives of Calculations
- Strings Date Logical Calculation
- Arithmetic Calculations
- Aggregation Options
- Grand Totals and Sub-Totals
- Quick Table Calculations
- Custom Table Calculations
- Ad-hoc Analytics
- LOD Calculations
- Parallel Period
- Moving Averages
- Running totals
- Window Averages
- Trend Lines
- Predictive Models

Parameters, Mapping, and Locations

- What is a Parameter
- How to create a Parameter
- Parameter Controls
- What is Mapping
- Modifying Locations within Tableau
- Importing and Modifying Custom Geocoding
- Background Image
- Exploring Geographic Search
- Pan Zoom Lasso and Radial Selection

Dashboards and Work Sharing

- What is a Dashboard?
- How to build Dashboards
- How to build Interactive Dashboards
- What are Action Filters?
- How to create Story Boards
- Best Practices to create Dashboards
- Annotations
- Tool Tips and keyboard short cuts
- Sharing work
- Tableau Online
- Tableau Reader
- Tableau Public

Power BI

Duration: 40+ Hours with hands on tutorials

- Introduction To Power BI
    - Introduction To Power BI – Need, Imprtance
    - Power BI – Advantages And Scalable Options
    - History – Power View, Power Query, Power Pivot
    - Power BI Data Source Library And DW Files
    - Cloud Colloboration And Usage Scope
    - Business Analyst Tools, MS Cloud Tools
    - Power BI Installation And Cloud Account
    - Power BI Cloud And Power BI Service
    - Power BI Architecture And Data Access
    - OnPremise Data Acces And Microsoft On Drive
    - Power BI Desktop – Instalation, Usage
    - Sample Reports And Visualization Controls
    - Power BI Cloud Account Configuration
    - Understanding Desktop & Mobile Editions
    - Report Rendering Options And End User Access
    - Power View And Power Map. Power BI Licenses
    - Course Plan – Power BI Online Training
- CREATING POWER BI REPORTS, AUTO FILTERS
    - Report Design With Legacy & .DAT Files
    - Report Design With Databse Tables
    - Understanding Power BI Report Designer
    - Report Canvas, Report Pages: Creation, Renames
    - Report Visuals, Fields And UI Options
    - Experimenting Visual Interactions, Advantages
    - Reports With Multiple Pages And Advantages
    - Pages With Multiple Visualizations. Data Access
    - PUBLISH Options And Report Verification In Cloud
    - “GET DATA” Options And Report Fields, Filters
    - Report View Options: Full, Fit Page, Width Scale
    - Report Design Using Databases & Queries
    - Query Settings And Data Preloads
    - Navigation Options And Report Refresh
    - Stacked Bar Chart, Stacked Column Chart
    - Clustered Bar Chart, Clustered Column Chart
    - Adding Report Titles. Report Format Options
    - Focus Mode, Explore And Export Settings
- REPORT VISUALIZATIONS And PROPERTIES

- Power BI Design: Canvas, Visualizations And Fileds
- Import Data Options With Power BI Model, Advantages
- Direct Query Options And Real-Time (LIVE) Data Access
- Data Fields And Filters With Visualizations
- Visualization Filters, Page Filters, Report Filters
- Conditional Filters And Clearing. Testing Sets
- Creating Customised Tables With Power BI Editor
- General Properties, Sizing, Dimensions, And Positions
- Alternate Text And Tiles. Header (Column, Row) Properties
- Grid Properties (Vertical, Horizontal) And Styles
- Table Styles & Alternate Row Colors – Static, Dynamic
- Sparse, Flashy Rows, Condensed Table Reports. Focus Mode
- Totals Computations, Background. Boders Properties
- Column Headers, Column Formatting, Value Properties
- Conditional Formatting Options – Color Scale
- Page Level Filters And Report Level Filters
- Visual-Level Filters And Format Options
- Report Fields, Formats And Analytics
- Page-Level Filters And Column Formatting, Filters
- Background Properties, Borders And Lock Aspect

- CHART AND MAP REPORT PROPERTIES

  - CHART Report Types And Properties
  - STACKED BAR CHART, STACKED COLUMN CHART
  - CLUSTERED BAR CHART, CLUSTERED COLUMN CHART
  - 100% STACKED BAR CHART, 100% STACKED COLUMN CHART
  - LINE CHARTS, AREA CHARTS, STACKED AREA CHARTS
  - LINE AND STACKED ROW CHARTS
  - LINE AND STACKED COLUMN CHARTS
  - WATERFALL CHART, SCATTER CHART, PIE CHART
  - Field Properties: Axis, Legend, Value, Tooltip
  - Field Properties: Color Saturation, Filters Types
  - Formats: Legend, Axis, Data Labels, Plot Area
  - Data Labels: Visibility, Color And Display Units
  - Data Labels: Precision, Position, Text Options
  - Analytics: Constant Line, Position, Labels
  - Working With Waterfall Charts And Default Values
  - Modifying Legends And Visual Filters – Options
  - Map Reports: Working With Map Reports
  - Hierarchies: Grouping Multiple Report Fields
  - Hierarchy Levels And Usages In Visualizations
  - Preordered Attribute Collection – Advantages
  - Using Field Hierarchies With Chart Reports
  - Advanced Query Mode @ Connection Settings – Options
  - Direct Import And In-Memory Loads, Advantages

- HIERARCHIES And DRILLDOWN REPORTS

  - Hierarchies And Drilldown Options

- Hierarchy Levels And Drill Modes – Usage
- Drill-Thru Options With Tree Map And Pie Chart
- Higher Levels And Next Level Navigation Options
- Aggregates With Bottom/Up Navigations. Rules
- Multi Field Aggregations And Hierarchies In Power BI
- DRILLDOWN, SHOWNEXTLEVEL, EXPANDTONEXTLEVEL
- SEE DATA And SEE RECORDS Options. Differences
- Toggle Options With Tabular Data. Filters
- Drilldown Buttons And Mouse Hover Options @ Visuals
- Dependant Aggregations, Independant Aggregations
- Automated Records Selection With Tabular Data
- Report Parameters : Creation And Data Type
- Available Values And Default Values. Member Values
- Parameters For Column Data And Table / Query Filters
- Parameters Creation – Query Mode, UI Option
- Linking Parameters To Query Columns – Options
- Edit Query Options And Parameter Manage Entries
- Connection Parameters And Dynamic Data Sources
- Synonyms – Creation And Usage Options

- POWER QUERY & M LANGUAGE

  - Understanding Power Query Editor – Options
  - Power BI Interface And Query / Dataset Edits
  - Working With Empty Tables And Load / Edits
  - Empty Table Names And Header Row Promotions
  - Undo Headers Options. Blank Columns Detection
  - Data Imports And Query Marking In Query Editor
  - JSON Files & Binary Formats With Power Query
  - JavaScript Object Notation – Usage With M Lang.
  - Applied Steps And Usage Options. Revert Options
  - Creating Query Groups And Query References. Usage
  - Query Rename, Load Enable And Data Refresh Options
  - Combine Queries – Merge Join And Anti-Join Options
  - Combine Queries – Union And Union All As New Dataset
  - M Language : NestedJoin And JoinKind Functions
  - REPLACE, REMOVE ROWS, REMOVE COL, BLANK – M Lang
  - Column Splits And FilledUp / FilledDown Options
  - Query Hide And Change Type Options. Code Generation

- POWER QUERY & M LANGUAGE

  - Invoke Function And Freezing Columns
  - Creating Reference Tables And Queries
  - Detection And Removal Of Query Datasets
  - Custom Columns With Power Query
  - Power Query Expressions And Usage
  - Blank Queries And Enumuration Value Generation
  - M Language Sematics And Syntax. Tranform Types
  - IF..ELSE Conditions, TransformColumn() Types
  - RemoveColumns(), SplitColumns(),ReplaceValue()

- Table.Distinct Options And GROUP BY Options
- Table.Group(), Table.Sort() With Type Conversions
- PIVOT Operation And Table.Pivot(). List Functions
- Using Parameters With M Language (Power Query Editor)
- Advanced Query Editor And Parameter Scripts
- List Generation And Table Conversion Options
- Aggregations Using PowerQuery & Usage In Reports
- Report Generation Using Web Pages & HTML Tables
- Reports From Page Collection With Power Query
- Aggregate And Evaluate Options With M Language
- Creating High-Density Reports, ArcGIS Maps, ESRI Files
- Generating QR Codes For Reports
- Table Bars And Drill Thru Filters

- DAX EXPRESSIONS – Level 1

    - Purpose Of Data Analysis Expresssions (DAX)
    - Scope Of Usage With DAX. Usabilty Options
    - DAX Context : Row Context And Filter Context
    - DAX Entities : Calculated Columns And Measures
    - DAX Data Types : Numeric, Boolean, Variant, Currency
    - Datetime Data Tye With DAX. Comparison With Excel
    - DAX Operators & Symbols. Usage. Operator Priority
    - Parenthesis, Comparison, Arthmetic, Text, Logic
    - DAX Functions And Types: Table Valued Functions
    - Filter, Aggregation And Time Intelligence Functions
    - Information Functions, Logical, Parent-Child Functions
    - Statistical And Text Functions. Formulas And Queries
    - Syntax Requirements With DAX. Differences With Excel
    - Naming Conventions And DAX Format Representation
    - Working With Special Characters In Table Names
    - Attribute / Column Scope With DAX – Examples
    - Measure / Column Scope With DAX – Examples

- DAX EXPRESSIONS – Level 2

    - YTD, QTD, MTD Calculations With DAX
    - DAX Calculations And Measures
    - Using TOPN, RANKX, RANK.EQ
    - Computations Using STDEV & VAR
    - SAMPLE Function, COUNTALL, ISERROR
    - ISTEXT, DATEFORMAT, TIMEFORMAT
    - Time Intelligence Functions With DAX
    - Data Analysis Expressions And Functions
    - DATESYTD, DATESQTD, DATESMTD
    - ENDOFYEAR, ENDOFQUARTER,ENDOFMONTH
    - FIRSTDATE, LASTDATE, DATESBETWEEN
    - CLOSINGBALANCEYEAR,CLOSINGBALANCEQTR
    - SAMEPERIOD And PREVIOUSMONTH,QUARTER
    - KPIs With DAX. Vertipaq Queries In DAX
    - IF..ELSEIF.. Conditions With DAX

- Slicing And Dicing Options With Columns, Measures
- DAX For Query Extraction, Data Mashup Operations
- Calcualted COlumns And Calculated Measures With DAX

Mongo DB

Duration: 10 hours with hands on tutorials

- Overview
- "NoSQL"
- What is MongoDB?
- JSON primer
- When / why should you use MongoDB?
- Installation and Administration
- Installing MongoDB
- Starting and stopping MongoDB servers
- The JavaScript console
- MongoDB Basics
- Servers
- Databases
- Collections
- Documents / Objects
- CRUD
- Indexes