STACK IT SOLUTIONS

DATA ANALYTICS

NOTE: **EACH SECTION WILL NOT BE LIMITED TO A LECTURE BUT WILL INCLUDE HANDS ON PROJECT TO ACCOMPANY THE SECTION. THIS WILL BE DONE TO ENSURE EACH STUDENT IS UP TO SPEED AND CAN SHOW THERE SKILLSET INDEPENDENTLY.

SYLLABUS
DATA ANALYSIS

Managing Data with SQL
- Foundations of Databases and SQL
- Navigating the SQL Server Management Studio IDE.
- Basics SELECT-FROM-WHERE statements
- Using logical Operators in SQL
- Pattern Matching in WHERE Clause
- Handling NULL Values
- SQL JOINS (aka Excel VLOOKUP)
- SQL Aggregations
- Subqueries and Temp Tables
- Data cleaning with SQL

DATA MODELING
- How data models are used in practice
- Overview of Entity Relationships(ER) and its significance to data modeling
- How to create an Entity Relationship Diagram (ERD)
- Normalization to reduce data redundancy
- De Normalize to improve performance
- Introduction to Data Warehousing

STACK IT
S O L U T I O N S

SYLLABUS
DATA ANALYSIS

DATA MIGRATION

- Importing and Exporting Data from SQL Server (RDBMS) to Excel, csv, flat files etc..
- Creating Extraction Transformation Load (ETL) package in SSIS
- Writing SQL Queries to migrate data from one platform to another
- Exporting Data from an RDBMS into Excel, csv and Business Intelligence tools like
- Tableau or Power BI

Creating Reports (Data Analysis)

- Translation of requirements into SQL driven reports/queries
- Steps for performing Data analysis
- Types of Data Analysis
- Create Charts and Graphs in Excel using Pivot tables
- Query data from RDBMS and display in Excel
- Create simple Dashboard using Power BI

SQL

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SYLLABUS
DATA ANALYSIS

INTRODUCTION
- What is Tableau? (Desktop, Server, Public)
- Why Tableau?

COLLECTING AND PREPARING DATA SOURCES
- Server Based Connections
- Coding Data Source before Importing to Tableau
- Data Relationships

VISUALIZATION TYPES /DIMENSIONS VS MEASURES
- Data Types
- Filters
- Rank
- Tooltips, Details, Color, Shape
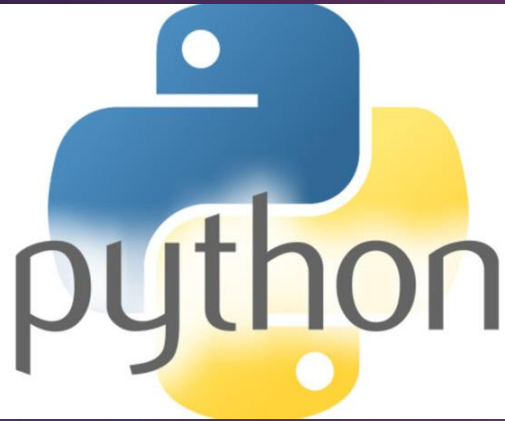- Actions

CALCULATIONS
- Parameters
- Case, If, Date Calcs, Sum, Sum(If), Count, Count Distinct, And/Or, etc
- Axis Computation
- Median, Average, Level of Detail CALCULATION

LETS's BUILD A DASHBOARD

SYLLABUS
DATA ANALYSIS

SETTING UP YOUR PYTHON ENVIRONMENT (IDE)

- Use Jupyter Notebook and Google Collab to configure your
  Integrated Development Environment for Data Analysis with Python's rich
  List of Libraries like Numpy, Panda and Matplotlib

GETTING YOUR DATA INTO PYTHON

- Define business case for analysis
- Understand the data
- Python libraries for Data Analysis
- Importing and Exporting Data into Python
- Begin Analysis with Python

DATA WRANGLING WITH PYTHON

- Transforming and processing your Data in Python
- Handling missing values
- Formatting and Normalizing Data in Python
- Turning Qualitative into Quantitative variables in Python
- Data Merging, Pivoting, Combining DataFrames, GroupBY
  DataFrames, Aggregation and Cross Tabulation with Python

DATA VISUALIZATION IN PYTHON

You will use Python's data Visualization tools to systematically explore a
selected dataset for it's properties and relationships. We will create a presentation
That communicates your findings to others using Python's rich visualization libraries

Our Toolkits

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Microsoft SQL Server

jupyter

tableau

Power BI

AND MUCH MORE ...