



DATA ANALYTICS

Data Science using Python | Tableau| SQL

(4 Months)

Note: Anyone without programming background can learn.

No cost repeat session | Life Long Doubt Clarification | 100% Practical Training
Intense Training on Data Science where students are encouraged to do more projects and research.

Topics	Sub-topics	Assignment & Projects
Python Programming (Fundamentals)		
Introduction to Python	Difference between High level and low level language	Python as a Calculator
	Environmental Setup, IDE, 3 Types of Windows.	
	Basic Input Output.	
	Variables, Data Types	
	Typecast and identify the types of data.	
	If Else Statement: While Loop: Forloop	
Control Flow Structure	Jumping Statements: Break, Continue	Rock, Paper and Scissor Game in Python Blind Number Game
	Random Library: Random Functions	
	User Defined Functions	
Functions	Built In Functions	Password Generator for Web Application
	Arbitrary Functions	
Data Structures	List, Tuple	Simple ChatBot
	Dictionary Set & String	
Modules & Package	How to create packages	
	Usage of Module	
File Handling	Where we using File handling concept nowadays	Admin Looger Application
	Method	
	Reading the data from File	
	Writing the content in it	
	Appending File	
Database connectivity using python	What is Database	
	Python Database Interaction	
	SQL Database connection using python	
	Creating and searching tables	
	Reading and storing config information on database	
	Programming using database connections	
Graphical User Interface	GUI programming	Loan Calculator LogIn System
Project Submission on Python Programming		

Data Science using Python		
	What is data & Types of data	
	What is data science and who is Data Scientist?	
Introduction to Data Science	Library	
	Pandas	Creating Data Frame, Filling NA values, Normalize data
	Matplotlib	
	Numpy	
Exploratory Data Analysis:	Measure of Central Tendency: Mean/median/Mode	
	Measure of Spread – Min, max, range, IQR	Data Cleaning on Bank Telemarketing Data
	Measure of shape – Skewness, Kurtosis	GDP Analysis
Data Visualization:	BarPlot, Horizontal Bar, Stacked, Grouped	Hoam Loan
	Histogram, Boxplot	
	Line Plot, Multi line Plot, Scatterplot	
	Piechart	
Regression	Regression Analysis	Stock Price Prediction on Dummy data based on Interest rate and Unemployment Rate
	Simple Linear Regression and Multiple Linear Regression	
	Non-Linear Regression	
	Logistic Regression	Predicting PayScale Based on Company, Education and designation
Clustering	Types of Clustering	
	Hierarchical Clustering	Clustering Customer Churn
	Agglomerative Clustering	Income, Expenditure based segmentation
	Application	
	Divisive Hierarchical Clustering	
	K-Means Clustering	
Classification:	Similarity in Distance Measurement	Insurance Buyer Classification



	Bayesian Classifier	
	Understanding Probability	
	Decision Tree, Random Forest	Bank Marketing Campaign Classifier
	Importance	
	DTM &TDM	
	WordCloud	
Text mining:	Natural Language Processing	Clean the extracted Reviews and Create WordCloud
	Scrap the Data from the Website for making Word Cloud.	
	ES,WMS	
	SMA	
Time Series	ARIMA	
	Holt's Exponential	
Project Submission – End -to –End Data Science Project Deployment		
Data Visualization using Tableau		
Introduction	Introduction to Tableau Installing desktop Tableau	
	Tableau help and online resources Tableau user interface	
Data Structure	File types	Superstore Data
	Data types in Tableau Green pills	
	Blue pills	
File Handling Concepts	Import/ Export files in Tableau,	
	Live and Extracts Connections in Tableau	
Explanatory Data Analysis	Converting data into ideal format Mapping Data	US Crime Dataset
	Data Filtration	
	Sorting Excluding data Splitting data fields	
	Understanding meta data	
	Dealing with missing values	
Data Conversion	Green pills to blue pills, Blue pills	
	to green pills	
Data Visualization	Introduction to different plots in tableau	US Crime Dataset
	Scatter plot , Bar plot, Pie Charts Line and Area charts, Heap Maps Crosstabs, Maps, Tree maps,	
	Packed bubble, Polygon Maps	
Data Merging	Combining multiple data source using join, blend, union.	
	Creating Sets Formatting pane	
	Tooltips	
Data Mapping	Mapping of data in tableau,	
	Making Map view error sorting Customizing maps	
	use of filters in maps	
Calculations	Table Calculations	Superstore Data

in Tableau	Importing calculations to workbook calculation syntax	
	table calculations	
	level of detail expression in tableau	
Publish YourWork	Publish to tableau online	
	Publish to tableau server	
Project – End -to -End Project Deployment using Tableau		
SQL		
Day 1	SQL Introduction Theory Installation Create Database Use database Create tables Drop tables Insert data Show data	
Day 2	Where clause with operators And or Not Expression In Between Like Wildcard	
Day 3	Data types in detail Built in functions Date time functions Aggregate functions Aliasing	
Day 4	Order by clause Group by clause Distinct clause Limit clause	
Day 5	Update statement Delete statement Alter statement	
Day 6	Constraints	
Day 7	Joins	
Day 8	Subqueries	
Day 9	Excel connection Views	
Day 10	Case Study	
Day 11	while If Exists	
Day 12	Functions	
Day 13	Triggers	
Day 14	Stored Procedure	
Day 15	Case Study	