



COURSE CURRICULUM

Week	Units	Day	Date	Topics
1	Python Basics	1	31/07/2023	Getting started with Python-setting up of the working environment in Python, Running Python scripts/jupyter notebooks
		2	01/08/2023	Python Basics: Data Types-Numbers, Strings, Printing, Lists, Dictionaries, Booleans, Tuples, Sets and their usage
		3	02/08/2023	Comparison operators-if,elif,else statements; for loops, while loops
		4	03/08/2023	Range, List comprehension, Functions, Lambda Expressions, Map & Filter, Method
	NumPy Library	5	04/08/2023	Introduction to Numpy Libraries; Arrays; Built-In Methods: Arrange, Zeros & Ones, Linspace, Eye
2	Pandas	1	07/08/2023	Random Functions, Reshape, Arithmetic operations, Min & Max; Sum & Count; Mean, Median, Mode; Shape; Universal Array Functions
		2	08/08/2023	Introduction to pandas Libraray; Selecting a single column; A Closer look at Series, Important Series Methods
	3	09/08/2023	unique & nunique; nlargest & nsmallest; Selecting Multiple Columns; value_counts() Method	
	Indexing & Sorting	4	10/08/2023	Set_Index Basics; setting index with read_csv; Bracket Indexing and Selection; Broadcasting, Indexing a 2D array
		5	11/08/2023	Selection; sort values intro; sorting by multiple columns; sorting text columns; sort_index; Sorting and Plotting; loc; iloc; loc & iloc with Series (Assignment-1)



COURSE CURRICULUM

Week	Units	Day	Date	Topics
3	Data Frames	1	14/08/2023	Inspecting DataFrames: head(), tail(), etc; DataTypes and info(); Sample Dataset Walkthrough; Filtering With Comparison Operators; The Between Method; The isin() Method; Combining Conditions.
		2	15/08/2023	Adding & Removing Columns: Dropping Columns; Dropping Rows; Adding Static Columns; Creating New "Dynamic" Columns; Updating Values-Renaming Columns and Index Labels; The replace() method; Updating Values Using loc[];
		3	16/08/2023	Updating Multiple Values Using loc[]; Making Updates With loc[] and Boolean Masks; Casting Types With astype(); Introducing the Category Type; Casting With pd.to_numeric(); dropna() and isna(); fillna(); Working with Dates and Times:
	Matplotlib Library	4	17/08/2023	Intro to Matplotlib Library-Anatomy of Plots; Figsize & Plot Dimensions; Changing Matplotlib Stylesheets; Bar Plots Histograms; Scatter Plots; Pie Plots
		5	18/08/2023	Grouping & Indexing- Introducing Groupby; Exploring Groups; Split-Apply-Combine; Hierarchical Indexing
4	Working with Text	1	21/08/2023	The String Datatype Vs. Object Datatype; Upper(), Lower(), and Capitalize(); Indexing String Series With []; Apply, Map & ApplyMap-Appling Functions to series: Different Methods
	Concatenation	2	22/08/2023	Concatenating Series; Concatenating DataFrames; The DataFrame Merge() Method
	Seaborn Library	3	23/08/2023	Introduction to seaborn Libraries, Seaborn Lineplots & Scatterplots; Seaborn Histograms; KDE Plots; Bivariate Distribution Plots
		4	24/08/2023	Seaborn Categorical plots: CountPlot, Strip & Swarm Plots; Boxplots, barplots, pairplots
	Capstone Project	5	25/08/2023	Capstone Project: Data Exploration, Data wrangling & Data Visualization (Based on Numpy, pandas, Matplotlib and Seaborn Libraries) (Day-I)
		6	26/08/2023	Reserve day (For discussion/doubt clearance on the capstone project)