

ASSIGNMENT 1

1. Basic Data Manipulation with pandas

- **Task:** Load a dataset (e.g., a CSV file) into a pandas DataFrame. Perform basic operations like viewing the first 10 rows, finding the data types of each column, and summarizing the statistics of the dataset.

2. Exploratory Data Analysis (EDA)

- **Task:** Take any dataset, perform exploratory data analysis to identify null values, duplicate entries, and unique counts for categorical columns. Provide a summary report.

3. Data Visualization Basics

- **Task:** Use matplotlib and seaborn to create a bar chart, histogram, and scatter plot from a small dataset (any dataset of your choice).

4. Descriptive Statistics

- **Task:** Calculate measures like mean, median, mode, standard deviation, and variance for numerical columns in a dataset.

5. Data Filtering

- **Task:** Filter rows based on conditions. For example, select rows where a column's value exceeds a certain threshold and save the result to a new DataFrame.