

### **Slide 1: Title Slide**

- Title of the project
- Project workflow
- Student Name, DA/DS, Milestone – 1 (Python Data exploration project)
- Date

### **Slide 2: Introduction**

- Brief overview of the project objectives and dataset.
- Importance of data understanding, preprocessing, and visualization in data analytics projects.

### **Slide 3: Data Understanding**

- Overview of the dataset structure: number of rows, columns, data types.
- Summary statistics: mean, median, min, max for numerical features.

### **Slide 4: Initial Exploration**

- Insights from initial exploration: any notable patterns, outliers, or missing values observed.

### **Slide 5: Missing Values Handling**

- Techniques used to detect missing values.
- Techniques used to handle missing values (e.g., imputation, deletion).
- Before-and-after comparison: Shape of the dataset

### **Slide 6: Outlier Handling**

- Strategies for identifying and handling outliers (e.g., removal, transformation).
- Box plots or scatter plots to visualize outliers in numerical features.
- Explanation of outlier removal techniques and impact on the dataset.

### **Slide 7: Fixing rows and columns**

- Details of fixing rows and columns.
- Before-and-after comparison: Shape of the dataset

### **Slide 8: Handling Invalid Values**

- Identification of invalid or erroneous entries in the dataset.
- Techniques used to correct or remove invalid values.
- Examples of specific invalid values encountered and how they were addressed.

### **Slide 9: Derived Metrics**

- Description of derived metrics created to enhance the dataset.
- Examples of derived metrics and their significance in the analysis.

### **Slide 10-20: Data Visualization (EDA)**

- Overview of exploratory data analysis techniques used.
- Summary of key insights and findings from the visualization process.
- Selection of impactful visualizations from univariate, segmented univariate, bivariate, and multivariate analysis.
- Graphs: Include representative visualizations such as histograms, bar charts, scatter plots, and heatmaps showcasing key analysis results.