Project Overview

This project performs **Exploratory Data Analysis (EDA)** on a retail sales dataset to uncover patterns and trends in customer behavior, product performance, and overall sales metrics. The analysis is visualized using Python libraries such as **Matplotlib** and **Seaborn** to generate insightful graphs.

Dataset:

- **Filename:** 🌐 Retail Sales Dataset
- **Contents:** The dataset includes information about retail orders such as:
  - Order Date
  - Total Sales
  - Buyer Age
  - Buyer Gender
  - Product Category

Tools & Libraries Used :

- **Python 3**
- **Pandas** – Data manipulation and analysis
- **Matplotlib** – Data visualization
- **Seaborn** – Enhanced data visualization

🔍 Key Operations Performed :

1. **Data Loading & Cleaning**
   - Imported CSV data using pandas
   - Converted Order Date to datetime format
   - Checked for and removed missing values
2. **Descriptive Statistics**
   - Displayed .info() and .describe() summaries
   - Calculated **mean**, **median**, **mode**, and **standard deviation**
3. **Visual Explorations**
   - 📈 **Daily Sales Trends:** Line chart of total sales per day
   - 📊 **Buyer Age Distribution:** Histogram
   - 🧍‍♂️ **Buyer Gender Breakdown:** Bar chart
   - 🛒 **Top Product Categories by Sales:** Bar chart

✅ Project Outcomes

- Cleaned and prepared raw retail data for analysis.
- Identified key trends in buyer behavior and product sales.
- Built foundational skills in EDA using Python and visualization libraries.