**Project: Customer Purchase Behavior Analysis**

This project aims to explore how customer demographics (like age, gender, income) relate to their spending behavior using Python.

**Step-by-Step Instructions**

**Step 1: Set Up Your Environment**

1. Extract the ZIP file: customer\_analysis\_project.zip.
2. Open customer\_analysis.ipynb in **Jupyter Notebook** or **VS Code with Jupyter extension**.
3. Ensure that you have the required libraries:

**Step 2: Import Libraries and Load Data**

**Step 3: Initial Data Exploration**

View the first 5 rows to understand the dataset.

Check for missing values and get a statistical summary.

**Step 4: Visualize Gender Distribution**

This shows how many male and female customers are in the dataset.

**Step 5: Analyze Spending Score by Gender**

Understand which gender tends to spend more.

**Step 6: Explore Relationship Between Age and Spending Score**

Determine whether younger or older customers tend to spend more.

**🔹 Step 7: Category-Wise Spending Analysis**

See which purchase category (Clothing, Electronics, Groceries) has the highest average spending.

**🔹 Step 8: (Optional) Add More Analysis**

Some ideas:

* Compare income vs spending.
* Create pie charts of category distributions.
* Add insights or summary comments using markdown cells.

**Step 9: Write a Conclusion**

In a new markdown cell at the end of the notebook, summarize:

* Who are the high spenders?
* Are there patterns by gender or age?
* What could a marketing team do based on this?