

Business Insights from Given Dataset

The process of deriving meaningful insights was divided due to the number of derivable insights and was completed by analyzing each dataset one by one. Here is what I could find:

Customers.csv

Data for 200 customers has been provided, with their signup dates and region of belonging.

1. Regional Customer Distribution

Insight: South America has the largest customer base (40%), but North America generates more total revenue due to higher spending per customer.

Actions:

- Launch **premium product campaigns** in North America (e.g., high-end electronics).
- Expand marketing in Europe (lower penetration) using localized ads and partnerships.

2. Customer Activity Distribution by Timeline

Insight: Customers sign-up data was distributed really well, but still there was a major leaning towards a larger number of sign-ups coming in **2024**, but the growth rate constantly fell **2022 onwards**. Busiest sign-up months all came from 2024.

Products.csv

1. Distribution Of Products

Insight: Products have been well distributed, with all categories contributing to **23%-26%** of total products available. The price ranges however tell us the **lack of attention** catered towards customers who tend to spend lesser as most products are in the range of **251-500\$**.

Actions:

- Increase number of cheaper products in inventory (0-250\$)

Transactions.csv

Key metrics

- Total Revenue: \$689,995.56
- Average Order Value: \$690.00
- Total Transactions: 1,000
- Unique Customers: 199

1. Top Revenue-Driving Categories

Insight: Electronics (27% of revenue) and Books (28%) dominate sales, with P029 (TechPro Headphones) and P079 (TechPro Cookbook) as top sellers.

Actions:

- Bundle Electronics with Books (e.g., "Smart Home + Recipe Kit").
- Increase stock of high-margin Electronics (e.g., P050 Smartwatch).

2. Seasonal Sales Trends

Insight: Sales peak in Q4 (holidays) and August (back-to-school), but dip in **Q2**.

Actions:

- Run **Q2 promotions** (e.g., "Spring Refresh Sale") with discounts on slow-moving inventory.
- Pre-plan holiday bundles (e.g., "Festive Tech Gift Packs") to maximize Q4 revenue.

3. High-Value Customer Retention

Insight: Top 5% of customers (e.g., C0141, C0054) contribute majorly to revenue.

Actions:

- Offer **exclusive loyalty rewards** (e.g., early access to sales, free shipping).
- Use personalized email campaigns targeting their frequent purchases (e.g., Electronics + Home Decor).