

Exploratory Data Analysis (EDA) Insights

By Sarika Kushwaha

Customer Analysis:

Customer Distribution by Region

After analyzing the customer distribution, I noticed that South America has the highest number of customers, followed by Europe, North America, and then Asia with the lowest customer count.

Asia (Low Customers): Big opportunity to grow. Try region-based offers or promotions to attract more people.

South America (High Customers): Focus on keeping customers happy with loyalty programs, offers, and good service.

Europe and North America (Moderate): Look into trends to improve products and reach more customers.

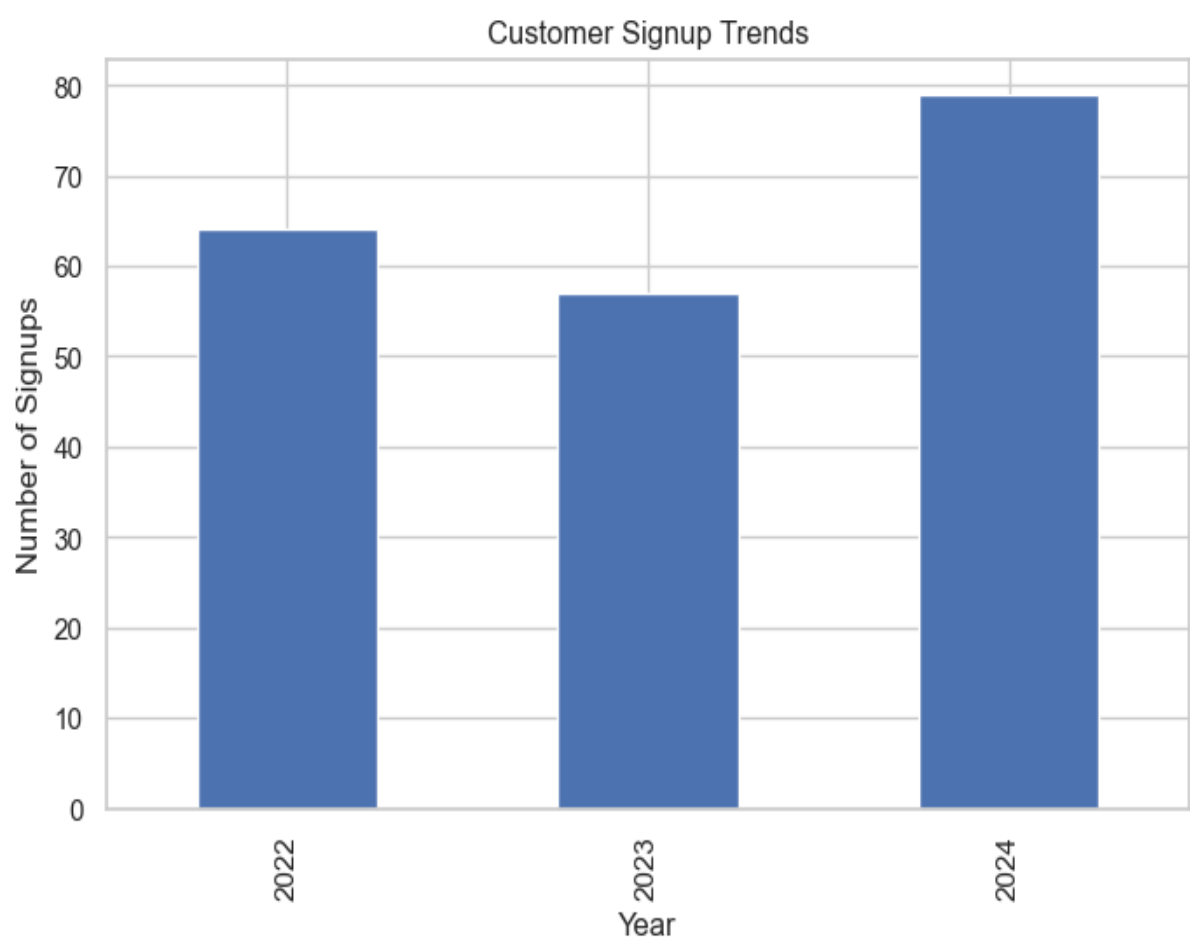


Customer Signup Trends (2022-2024)

2022: Customer signups were strong, showing good growth and engagement.

2023: There was a noticeable decline in signups, which could indicate challenges such as increased competition, reduced marketing efforts, or customer dissatisfaction.

2024: Signups significantly increased, suggesting successful interventions or a renewed interest in our offerings.

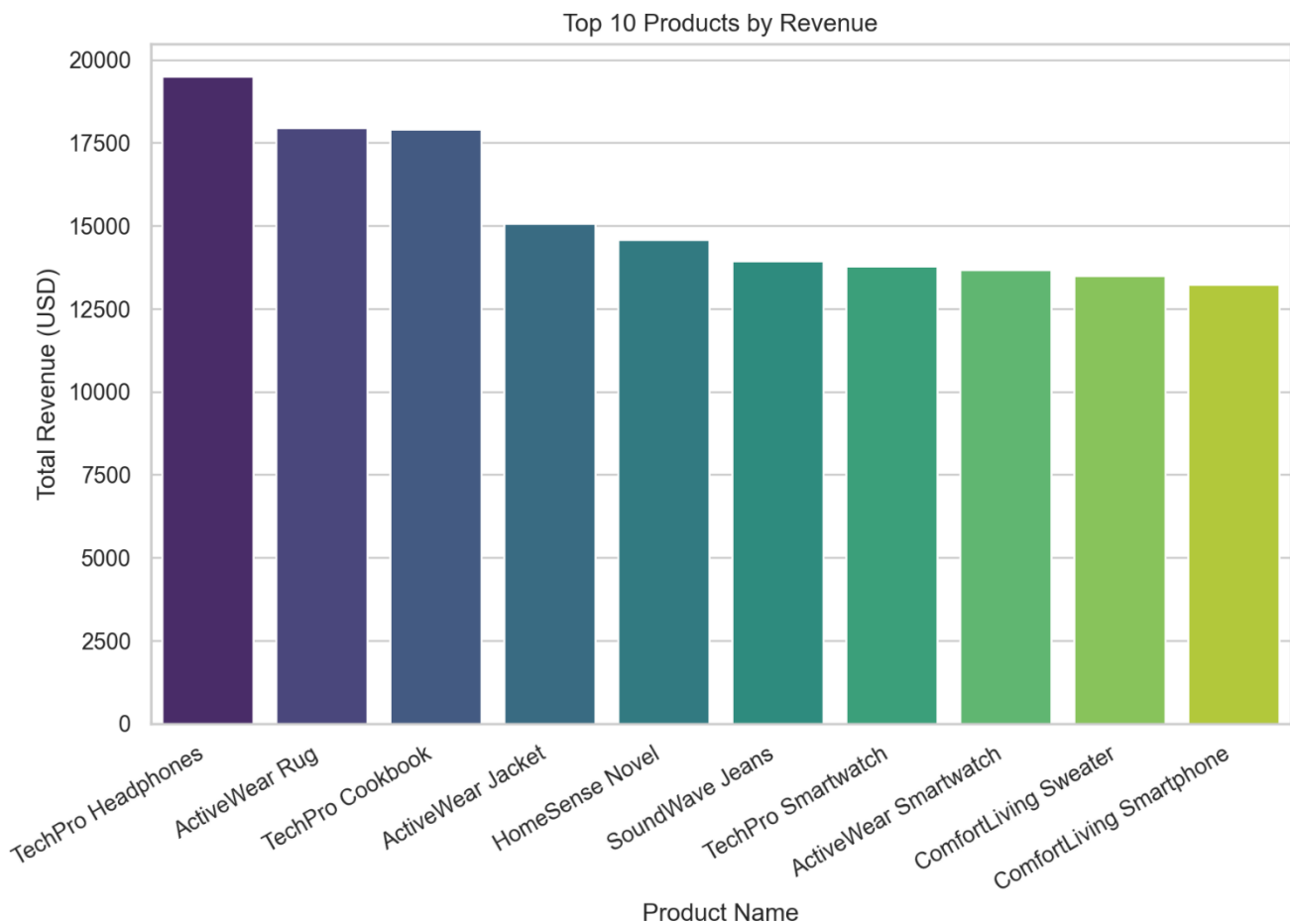


Product Analysis:

Top 10 Revenue-Generating Products

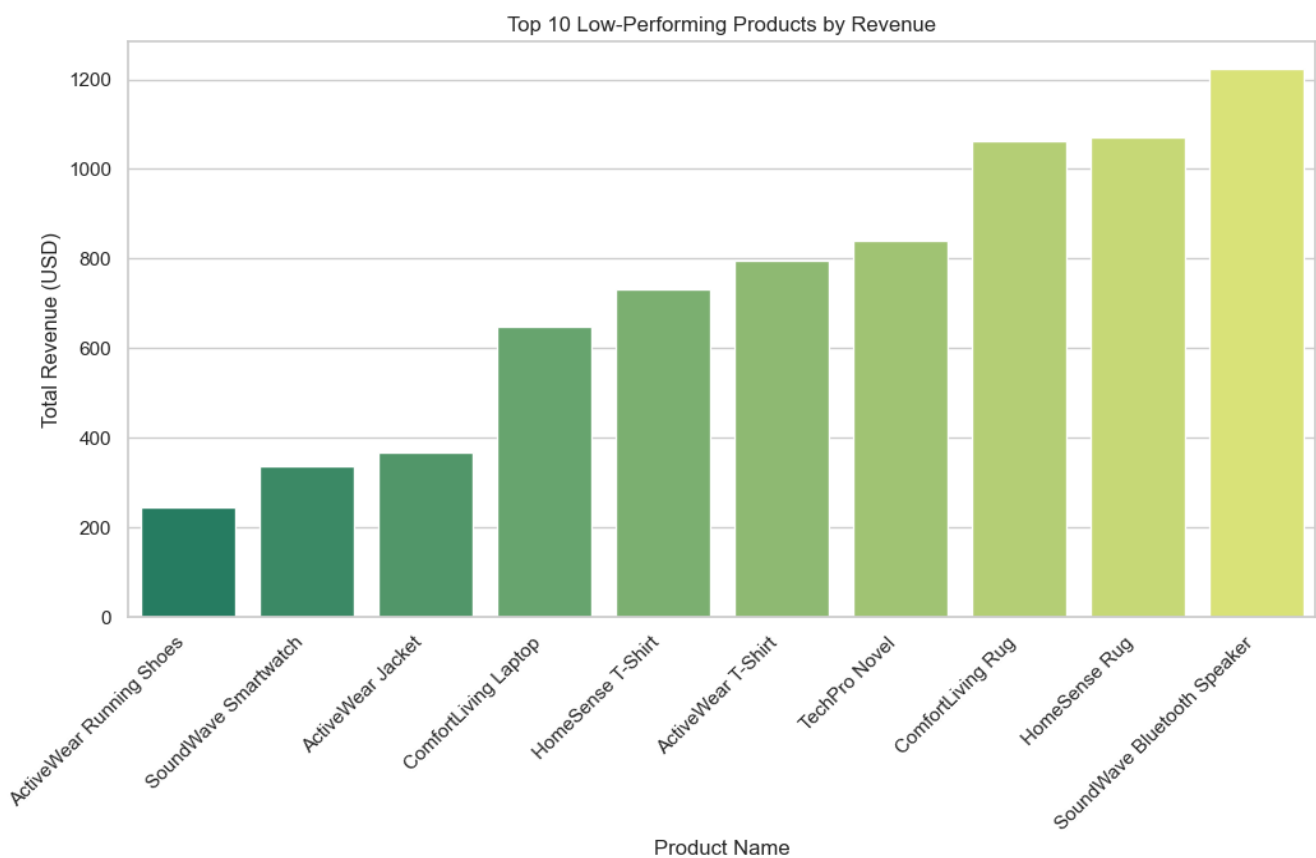
The TechPro Headphones (P029) and TechPro Cookbook (P048) are leading the revenue charts. Products like these, especially TechPro's electronics (headphones, smartwatches), are clearly in demand and should be highlighted in the marketing strategies.

I can also see a growing trend in lifestyle and fitness-related products, like the ActiveWear Rug (P079) and ActiveWear Jacket (P020), which presents an opportunity to expand our presence in the active lifestyle market.



Low-Performing Products

Some products like ActiveWear Running Shoes, SoundWave Smartwatch, ComfortLiving Laptop, and TechPro Novel are underperforming significantly. This could be due to factors like low demand, strong competition, or misalignment with current customer preferences. It would be wise to investigate further to understand if these products need to be rebranded, marketed differently, or possibly removed from the catalog.



Transaction and Revenue Analysis

Monthly Transaction Trends

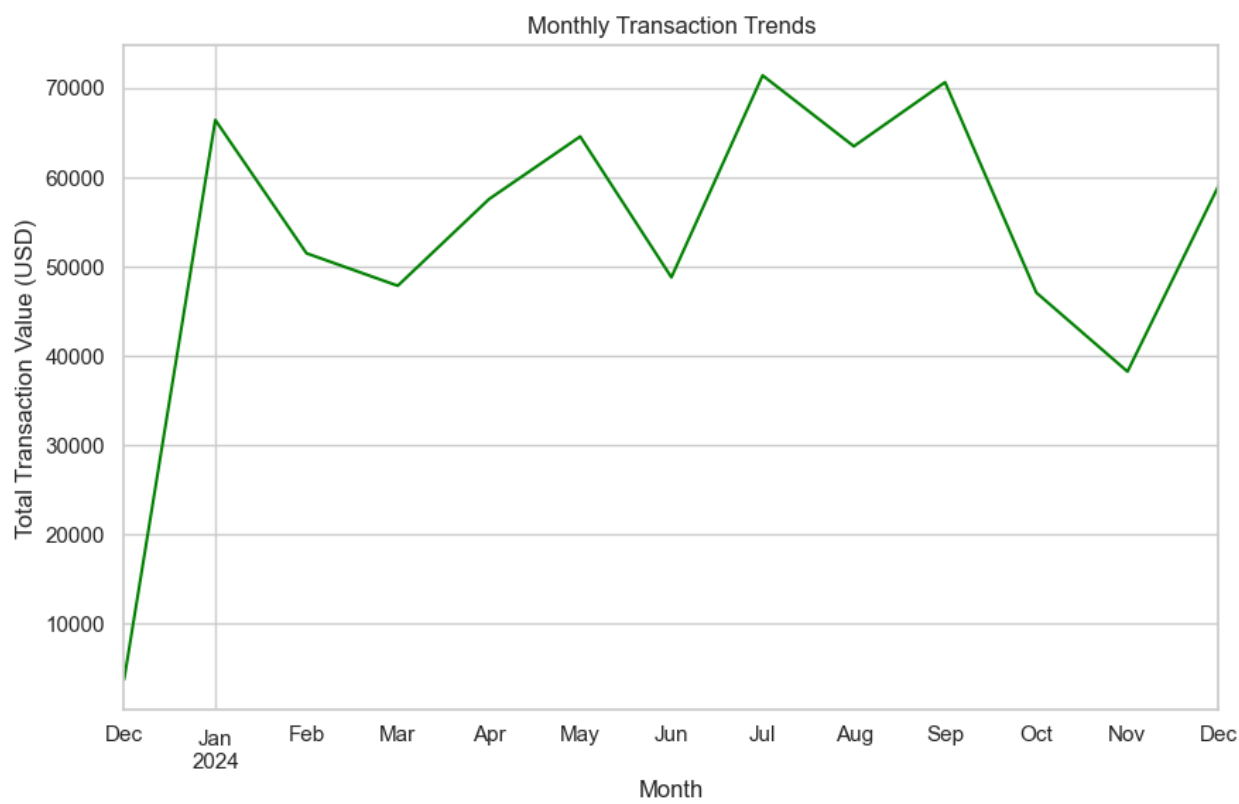
High-Performing Months (January, May, July, September):

These months show significant transaction spikes, likely due to seasonal sales or promotions.

Low-Performing Month: November has low sales, possibly due to a post-holiday slump or lack of promotions.

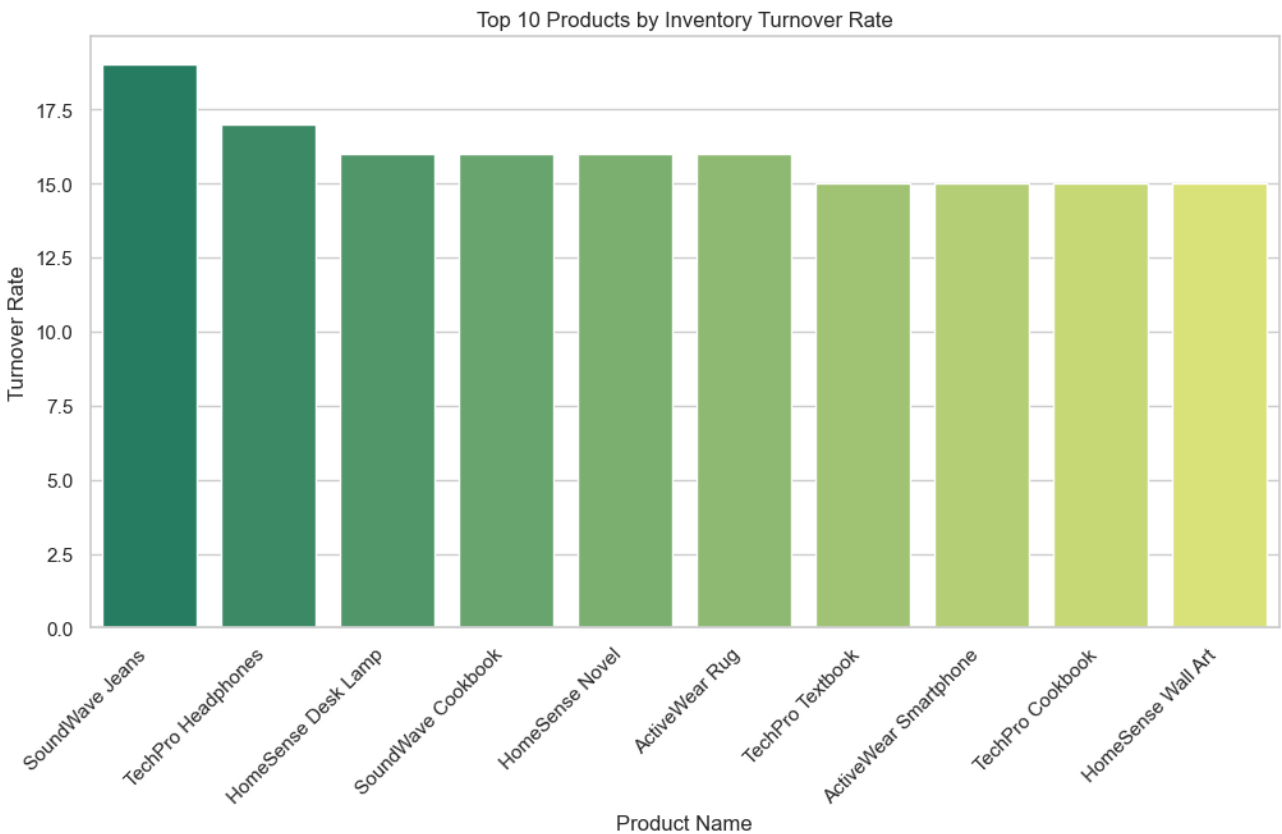
Moderate Months:

Other months have steady sales, but no significant spikes.



Inventory Turnover Rate

Products such as SoundWave Jeans (P059), with a turnover rate of 19, and TechPro Headphones (P029), with a turnover rate of 17, are performing well. These fast-moving products indicate high demand, and we should ensure adequate stock levels to avoid running out of inventory.



Non-Transacting Customers

A customer like Amy Carpenter (C0180) signed up but hasn't made any purchases yet. This suggests she might not have found the products appealing, encountered issues navigating the site, or faced other barriers that prevented her from completing a purchase. By identifying and segmenting these non-transacting customers, we can create targeted strategies to convert them into active buyers, whether through personalized recommendations, better onboarding experiences, or follow-up campaigns.

Top 10 High-Value Customers

Customers like C0141, C0054, and C0065 are driving the highest revenue, with C0141 being the top spender at \$10,673.87. Understanding the behaviours and preferences of these high-value customers can help us tailor personalized offerings and loyalty programs to retain them.

