Following are top 10 insights I found, due to word restrictions I am putting very little from .ipynb file in here, I strongly suggests to have a look in ipynb file where detailed and more insights are present!

1. Books are the most purchased category, contributing the highest number of transactions and revenue, with products 'SoundWave Cookbook'(P054) and ‘SoundWave Jeans’(P059) being the top sellers, while SoundWave Headphones(P031) and SoundWave Mystery Book(P099) are the least sold.

2. Transactions follow a strong seasonality pattern, peaking in January and displaying recurring monthly, weekly, and daily trends, with 95% of all transactions occurring in 2024.

3. South America contributes the highest total transaction value, making it the most lucrative region despite having a similar number of customers as other regions.

4. Most customers have made between 1 to 10 transactions, with 5 being the most common, while customer C0109 made the highest number of purchases (32 items).

5. Total transaction value is right-skewed, with 75% of transactions below $1,000, a minimum transaction value of $16, and a maximum transaction value of $1,991.

6. Product pricing appears artificially uniform, with categories containing nearly equal numbers of products (23-26 each), and Books being the most expensive while Home Decor is the least expensive.

7. Customer sign-ups are evenly distributed across 2022-2024, with the highest numbers in February, April, and March, and a noticeable trend of more sign-ups in the first half of each year.

8. Sign-ups peak on the 13th day of each month, and more customers sign up on weekends (Saturday and Sunday) compared to weekdays, suggesting behavioral trends.

9. Customers are fairly evenly distributed across regions, but South America has the highest number of customers, while Asia has the lowest.

10. The dataset exhibits artificial characteristics, including uniform product quantities (mostly 1-4 per purchase), evenly distributed customer regions, and repetitive patterns in transactions and sign-ups, suggesting it may be synthetically generated.