

## Business Insights

### Customers Dataset:

- 1.Sparse and Irregular Signup Activity: The signups are highly sporadic, with long periods of inactivity and occasional bursts. This indicates either inconsistent engagement or external factors influencing signups at irregular intervals.
- 2.Significant Peaks at Certain Times: Notable peaks occur around April 2022 and December 2024, which might correlate with specific events, campaigns, or promotions that drove user interest during these periods.
- 3.Sales Peaks and Variability: South America had the highest peak in April (1300 units) and showed the most variability, while Europe and Asia exhibited more stable sales patterns with moderate fluctuations. North America had irregular spikes, indicating seasonality or external factors.
- 4.Low Sales Periods: Asia and North America experienced low sales in January, July, August, and December, while Europe had dips in October and August.

### Transactions Dataset:

- 1.Top-Selling Products: P029 leads in total sales value, followed closely by P079 and P048, indicating these products contribute significantly to overall revenue.
- 2.Sales Distribution: There is a noticeable gap between the top three products and the rest, with P083, P019, and P041 having the lowest sales among the top 10. Businesses should focus on high-performing products while exploring ways to boost lower-ranked ones.
- 3.Sales Fluctuations: The sales trend shows significant ups and downs, with peaks in July and September and the lowest point in November.
- 4,Seasonal Impact: Sales tend to recover quickly after dips, indicating seasonal demand variations, requiring strategic inventory and marketing planning.

### Products Dataset:

- 1.Diverse Pricing: Product prices are spread across a wide range, with notable peaks around \$100, \$300, and \$450, indicating popular price points.
- 2.Price Variation Across Categories: All categories show a wide range of prices, but Books and Clothing have a slightly broader spread compared to Home Decor, which has a more compact range.
- 3.Median Price Differences: Books and Clothing have higher median prices, while Home Decor has the lowest, indicating potential pricing strategies or customer preferences in each category.
- 4.High-Value Products Across Categories: The most expensive products include textbooks, smartwatches, smartphones, cookware sets, and running shoes, indicating that premium pricing exists across multiple product categories.
- 5.Tech and Education Dominance: Tech-related items (smartwatches, smartphones) and educational materials (textbooks, cookbooks) are among the highest-priced, suggesting strong market value in these sectors.