

## **Business Insights**

The customers file contains 200 rows with no missing values.

The products file contains 100 rows with no missing values and the transaction file contains 1000 rows also with no missing values

By the Exploratory Data Analysis visualizations, we can produce the insights that

- 1). In the customer distribution graph, we can state the certain regions have a significantly higher number of customers, showcasing potential areas for practicing marketing efforts
- 2). In the Total Sales by Product Category column, we can see sales is dominated by categories like books and electronics suggesting top-performing product types
- 3). In the monthly sales trend chart, we can see the peak transaction periods, which can be leveraged for targeted marketing campaigns, seasonal discounts or stocking to meet demand spikes during these months
- 4). Underperforming Categories: In order to improve their performance, categories with lower sales may need to review their pricing policies, product positioning, or marketing initiatives.
- 5). Customer Engagement: By implementing localized marketing, it may be possible to increase overall sales in areas with a smaller customer base, which may represent unexplored markets.