## **Insight Summary**

1. **Data Quality and Outliers**
   * Minor data inconsistencies were found such as misspelled sub-categories like "Jack3ts" instead of "Jackets," and inconsistent casing in main\_category (e.g., "baby" vs "Baby"). These were cleaned to maintain consistency.
   * Key numerical fields such as final\_price are consistent with their components (quantity, price, and discount\_amount), so no adjustments were needed.
   * Values in review\_rating (1) and is\_returned (0) initially flagged as outliers were verified as valid and retained.
2. **Customer Age Group Spending**
   * Customers aged **18–24** show the highest average order values, challenging the assumption that older age groups (25–34) spend more.
3. **Payment Method Patterns**
   * Orders paid via **Gift Cards** exhibit the highest average spending and also the highest return rates, although no significant correlation was found with review ratings.
4. **Brand Return Rates vs Price**
   * Premium brands such as Nike, despite their higher price points, show return rates comparable to other non-premium brands, indicating price is not a sole predictor of returns.
5. **Delivery Time Impact**
   * Contrary to expectations, longer delivery times do **not** show a strong negative effect on review ratings or return rates. Other factors like product quality or price likely influence customer satisfaction more.
6. **Discount and Sales Dynamics**
   * Higher discounts lead to an increase in quantity sold but have a **minimal impact** on the overall return rate, dispelling concerns that heavy discounts necessarily increase returns drastically.
7. **Regional Differences in Returns**
   * The **Midwest** region accounts for the highest volume of orders as well as returns, suggesting regional factors may influence purchasing and return behavior.
8. **Device Type Behavior**
   * Mobile shoppers tend to have **lower average spends and lower return rates** compared to desktop users, indicating different shopping behaviors by device.