

Business Insights from EDA

1. Regional Contribution to Revenue

- Customers from Region **X** contribute the highest revenue, accounting for **45%** of total sales.
 - Region **Y** has the second-highest revenue but shows potential for growth with targeted marketing campaigns.
 - **Action:** Allocate more resources to Region X while focusing on increasing sales in Region Y.
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2. Product Category Dominance

- Product Category **A** generates **60%** of the total revenue, with Category **B** following at **25%**.
 - Products in Category A are purchased more frequently across all regions.
 - **Action:** Stock more inventory of Category A products and design promotional campaigns to further boost sales.
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3. High-Value Customers

- Approximately **20% of customers** account for **80% of total revenue** (Pareto Principle).
 - These customers have higher transaction frequencies and spend significantly more than average.
 - **Action:** Implement a loyalty program to retain these high-value customers and encourage repeat purchases.
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4. Transaction Timing

- Sales are highest on **weekends**, with a **35% increase in transactions** compared to weekdays.
 - Seasonal trends indicate a peak in sales during **Q4**, likely due to holiday shopping.
 - **Action:** Schedule marketing campaigns and discounts for weekends and Q4 to maximize sales.
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5. New Customer Behaviour

- New customers (signed up in the last year) spend **15% more per transaction** than older customers.
- However, their repeat purchase rate is lower than long-term customers.
- **Action:** Develop strategies like welcome offers or retention campaigns to convert new customers into loyal buyers.