eCommerce Purchase History from Electronics Store – Insights Report

# 1. Introduction

This report analyzes e-commerce sales data to uncover key trends, patterns, and insights related to sales performance, top brands, customer behavior, and category-wise sales. The findings will help improve business strategies by identifying opportunities for revenue growth, customer engagement, and product optimization.  
This dataset contains purchase history from April 2020 to November 2020 from a large home appliances and electronics online store.  
Each row represents a purchase event, linking users and products in a many-to-many relationship. The dataset includes brands, product categories, event timestamps, and sales figures. This analysis aims to uncover sales performance, customer behavior, and product trends to drive business growth.

# 2. Key Findings & Trends

## 🔹 Sales Performance Trends

Total Sales: $22 million+ in revenue was recorded in the dataset.  
 Monthly Trends: Sales were highest in November and December , indicating a “holiday season spike”.  
 Running Total Sales: Sales “steadily increased over time”, with occasional slow months.

Business Insight:  
The spike in sales during the last quarter of the year suggests an opportunity to run targeted marketing campaigns and discounts during Black Friday, Cyber Monday, and Christmas seasons.

## 🔹 Brand Performance

Top 3 Brands by Sales:  
 1. Samsung - $54.14M (largest contributor)  
 2. Apple - $37.12M  
 3. LG - $15.24M  
  
 Other brands like Huawei, Xiaomi, Philips, and Tefal also performed well but contributed significantly less.

Business Insight:  
The dominance of “Samsung and Apple” suggests these brands drive the majority of revenue . Strengthening partnerships, exclusive deals, or targeted advertising for these brands can further boost sales.  
Unknown brands contribute a significant portion of sales, indicating potential data inconsistencies or missing brand information. Data cleaning efforts may be required to improve accuracy.

## 🔹 Category-Wise Sales Performance

Top-Selling Categories  
 Electronics & Smartphones: $69.13M (31.35%)  
 Computers & Notebooks: $22.4M (10.16%)  
 Kitchen Appliances & TVs: Major contributors to revenue.  
  
 Low-Performing Categories:  
 Apparel (Gloves) and Furniture (Tables) generated minimal revenue.  
  
Business Insight  
Electronics dominate sales, making it a key focus area for marketing and promotions.  
Low sales in furniture and apparel suggest a lack of demand or visibility—consider re-evaluating inventory, pricing, or promotions in these categories.

## 🔹 Customer Behavior & Pricing Insights

Total Customers: 98K+  
Total Orders: 3M+  
 Average Order Value (AOV): $307.25  
Price Range Impact:  
 Most sales fall between mid-to-premium price ranges ($300+), indicating a preference for high-value products.  
  
Business Insight:  
The high AOV of $307.25 suggests that customers are willing to spend more on high-end electronics and appliances.  
Consider offering bundle deals or financing options for higher-priced items to increase conversions.

# 3. Correlations & Business Relationships

Brand Strength & Pricing: The top brands (Samsung, Apple, LG) dominate sales due to premium pricing and strong brand reputation.  
 Seasonal Demand & Sales Spikes: Higher sales occur during Q4 (October - December), confirming that holiday promotions significantly impact revenue.  
Product Category Contribution: Sales are heavily skewed towards electronics indicating less diversification across product categories.  
Business Recommendations  
Invest in marketing campaigns targeting high-demand seasons (Q4 & Black Friday). Leverage the success of top brands (Samsung, Apple, LG) with exclusive deals or partnerships.

Expand product diversification efforts for underperforming categories (Furniture, Apparel).  
Enhance customer engagement through discounts, loyalty programs, or financing options for high-ticket items.

# 4. Conclusion

The analysis of e-commerce data highlights “key growth opportunities” in brand partnerships, seasonal promotions, and pricing strategies. By implementing these insights, the business can increase revenue, improve customer retention, and optimize product offerings.