

Scaler Mart

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BACKGROUND

ScalerMart, a leading global electronics retailer, has experienced a significant downturn in sales, recording a nearly 50% decline in 2020 compared to the previous year.

OBJECTIVE

This presentation aims to uncover the underlying factors contributing to this sales decline and propose actionable, data-driven strategies to revitalize ScalerMart's market position.

DATA SOURCE

Sourced internally from Scaler Mart databases, this dataset encompasses three primary categories: Customers, Products, and Sales. These datasets offer in-depth insights into crucial facets of our business operations, covering customer demographics, product inventory, and sales performance.

DATA PREPARATION AND CLEANING

Data Overview:

We analyzed three key datasets: Customers, Products, and Sales, crucial for understanding our business.

Cleaning Steps:

- Handled missing values and removed duplicates for accurate analysis for each data set.
- Performed necessary data type conversions for precise manipulation.
- Merged datasets to create a complete view of the customer journey.

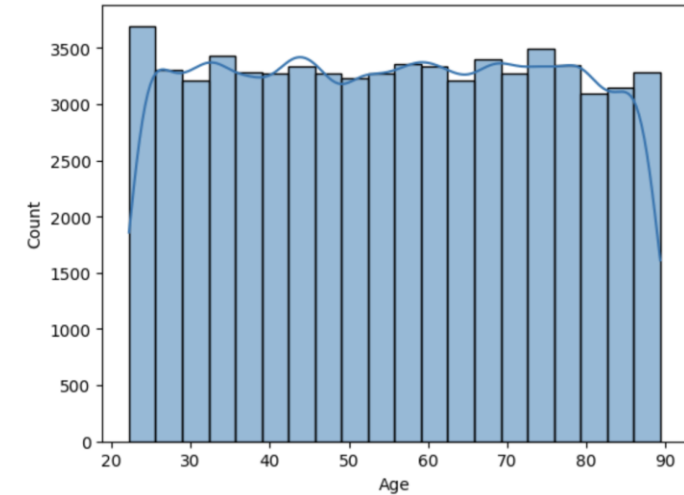
HYPOTHESIS

We hypothesize that the sales downturn may be attributed to shifts in customer preferences, economic impacts on spending, or internal operational challenges.

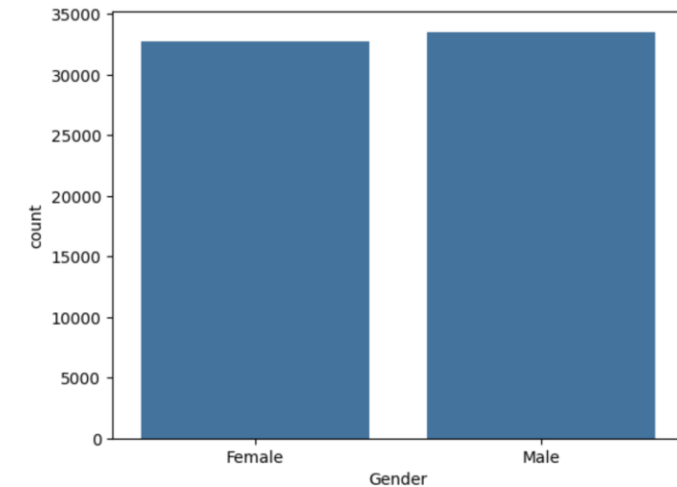
Exploratory Data Analysis (EDA): Customer Demographics

- Visualized age distribution, revealing a predominantly young consumer base, with a significant cluster between 20-35 years.
- Gender analysis showed a balanced mix, prompting gender-neutral marketing strategies

Customer Age Distribution:

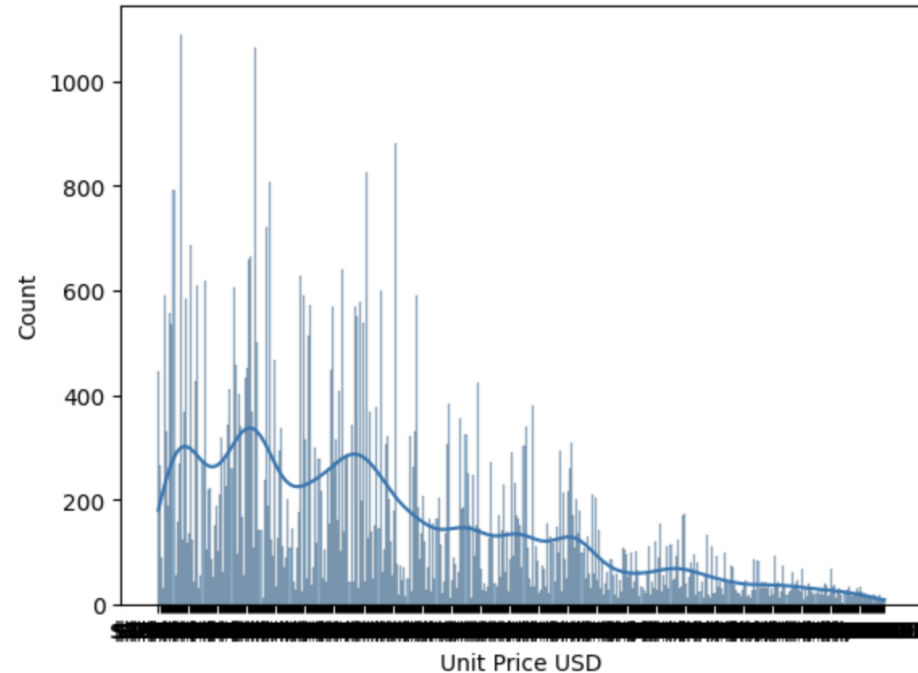


Customer Gender Distribution:



Exploratory Data Analysis (EDA): Product Analysis:

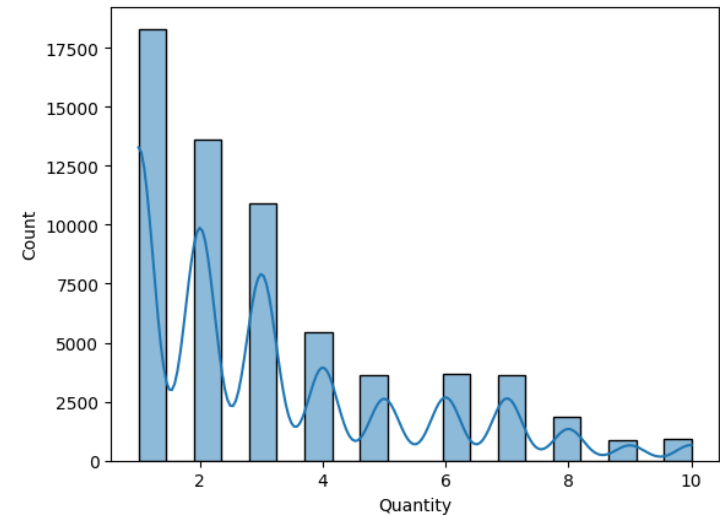
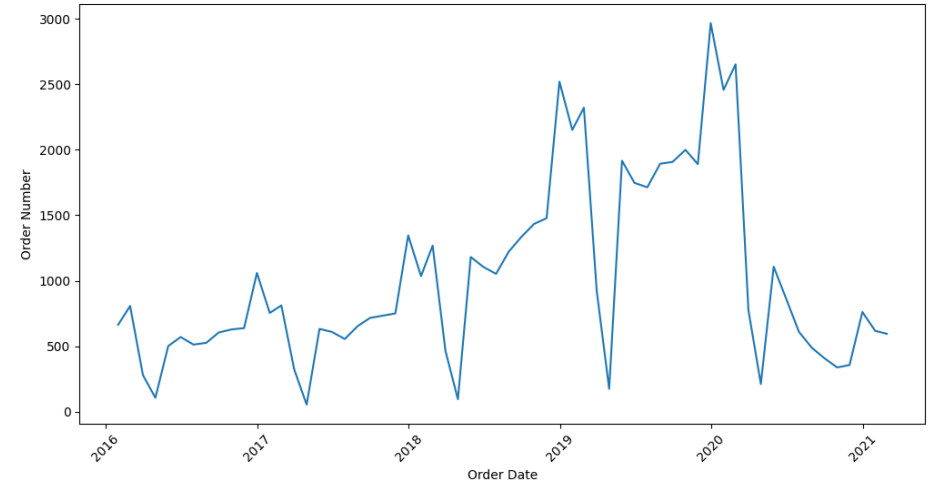
Product Price Distribution:



Product price distribution identified that most items fall within the mid-price range, suggesting a focus on value for money.

Exploratory Data Analysis (EDA): Sales Trends

Analyzed sales over time to identify significant drops around specific periods, correlating these with external events like economic downturns or competitive launches.



Customer Segmentation: Demographic

Segmented customers into age groups and regions, finding that different demographics show distinct purchasing patterns, which can guide targeted marketing.

Country: Germany
Number of customers: 6279
Average order quantity: 3.18
Average order value: 909.02

Country: France
Number of customers: 1962
Average order quantity: 3.11
Average order value: 875.92

Country: Italy
Number of customers: 2769
Average order quantity: 3.16
Average order value: 919.46



Gender: Female
Number of customers: 32727
Average order quantity: 3.14
Average order value: 882.22

Gender: Male
Number of customers: 33505
Average order quantity: 3.15
Average order value: 890.71



CLV Segment: Low

Number of customers: 16558

Average order quantity: 2.71

Average order value: 375.57

CLV Segment: High

Number of customers: 16561

Average order quantity: 3.24

Average order value: 934.37

CLV Segment: Medium

Number of customers: 16560

Average order quantity: 3.10

Average order value: 687.27

CLV Segment: VIP

Number of customers: 16553

Average order quantity: 3.44

Average order value: 1444.79

Customer Segmentation: Behavioral

Calculated Customer Lifetime Value (CLV) to segment customers into tiers. High CLV customers are less price-sensitive and more responsive to premium offerings.

Engagement Analysis



Customer Loyalty Trends:

Order Date	2016-12-31	2017-12-31	2018-12-31	2019-12-31	2020-12-31	2021-12-31
CustomerKey						
301	NaN	NaN	NaN	211	NaN	NaN
325	NaN	NaN	333	333	333	NaN
554	NaN	NaN	211	211	NaN	NaN
1042	NaN	NaN	111	NaN	NaN	NaN
1314	NaN	122	NaN	NaN	NaN	NaN

- **Loyalty Metrics:**
 - Developed a loyalty metric based on Recency, Frequency, and Monetary (RFM) value, identifying key loyal customer segments.
- **Customer Loyalty Trends:**
 - Displayed trends showing a decline in loyalty scores over the past year, signaling a need for an improved retention strategy.
- **Behavioral Correlations:**
 - Statistical tests revealed significant correlations between customer demographics and purchasing behavior, influencing product recommendations and inventory management.

Key Findings

Customer Insights:

Younger age groups dominate our customer base but show lower loyalty scores compared to older demographics.

Product Insights: A lack of product diversity may be causing sales stagnation, especially among our most engaged customers.

Market Trends: External competitive pressures are intensifying, necessitating a more aggressive response from ScalerMart.

Recommendations

- **Declining Loyalty:** Introduce a tiered loyalty program rewarding frequent shoppers with exclusive offers and first access to new products.
- **Product Diversity:** Expand product lines to include emerging tech trends that appeal to our younger audience.
- **Competitive Pressure:** Implement dynamic pricing models to stay competitive and retain market share.
- **General Strategy:** Enhance customer engagement through personalized marketing campaigns tailored to customer preferences and past purchasing behavior.