

## ShopNest Capstone Report

### Top Categories by Total Price

#### Visualization Summary:

The horizontal bar chart displays the top 10 product categories based on total sales in descending order. The x-axis represents the Sum of Total Sales (in millions), and the y-axis lists the product categories.

#### Key Insights:

Health\_beauty is the top-selling category, surpassing 1.44 million in total sales. This suggests a strong consumer preference or demand for wellness and personal care products.

Categories like watches\_gifts, bed\_bath\_table, and sports\_leisure also perform exceptionally well, crossing the 1 million mark, indicating these are highly sought-after and possibly gift-oriented or lifestyle-enhancing.

computers\_accessories and furniture\_decor signal steady demand in both tech and home improvement sectors.

Lower on the list but still in the top 10, auto and garden\_tools show niche but significant contributions to overall sales, suggesting potential for further exploration or seasonal promotions.

### Delayed Order Analysis

#### Visualization Summary:

This table provides insights into the total sales amount of delayed orders segmented by product category. Every listed order has the Delivery\_Status marked as "Delayed"

#### Key insights:

#### High-impact Categories:

watches\_gifts alone contributes to over ₹1.13 lakh in delayed orders, indicating serious fulfillment issues in a high-demand, high-value segment.

sports\_leisure and toys also show significant delays, potentially leading to customer dissatisfaction in time-sensitive gifting or recreational purchases.

#### Consistent Delay Across Segments:

Delays are seen not just in tech or lifestyle products, but also in home appliances, pet supplies, and even stationery, suggesting a broader supply chain or logistics bottleneck.

#### Low-value Categories:

Tablets\_printing\_image and signaling\_and\_security have minimal delay amounts, but recurring issues in such categories can still affect brand reputation or specific customer experiences.

### Monthly comparison of delayed and on time orders

#### Visualization Summary:

A) Type of Chart: 100% Stacked Column Chart

B) X-Axis (Month): January to December

C) Y-Axis (Order\_IDs): Representing the percentage share of delayed (red) vs on-time (blue) deliveries per month

D) Legend: ■ On Time, ■ Delayed

Key insights:

High Overall Delivery Performance:

Across all months, on-time orders (blue) dominate, consistently exceeding ~90% of total orders.

b) Delay Consistency:

A small but visible proportion of delays (red) persists each month, suggesting that while most deliveries are on time, there is a recurring issue in a minor fraction of orders.

c) Slight Monthly Variation:

March, April, and December show a slightly higher share of delayed orders compared to other months.

This could correlate with peak shopping periods, promotions, or supply chain stress points.

Payment method analysis

Visualization Summary:

A) Chart Type: Pie Chart

B) Measure: Payment values (%) by payment\_type

C) Legend Categories:

credit\_card – Dark Blue

boleto – Light Blue

debit\_card – Red-Orange

not\_defined – Dark purple

voucher – Light Purple

Key insights:

Credit Cards Are King: Over three-quarters of all payment value is processed through credit cards, highlighting this as the preferred and possibly most convenient option for most users.

Significant Boleto Usage: Boleto, a specific payment method, accounts for nearly 18%, showing a sizable segment prefers or requires non-card-based options.

Low Debit and Voucher Use: These methods represent a very small portion, which may be due to limited support or availability and business model focuses on post-paid transactions.

## Product Rating Analysis

### Visualization Summary:

A) Two bar charts:

Top 10 Products via Rating and

Bottom 10 Products via Rating

B) X-axis: Product Category Name

C) Y-axis: Average Customer Rating (Scale: 1 to 5)

Key insights: Top 10 categories

**Media & Books Dominate:** Categories like `cds_dvds_musicals`, `books_general`, and `books_imported` consistently receive high ratings, indicating customer satisfaction with tangible, content-based products.

**Gifting and Lifestyle:** `flowers` and `costume_jewelry` also rank high, reflecting appreciation in gifting or accessory segments.

**Kitchenware & Decor:** `la_cuisine` and construction tools round out the top 10, showing utility-based items also perform well when quality is ensured.

Key insights: Bottom 10 categories

**Comfort & Electronics Struggle:** Categories such as `home_comfort`, `audio`, and `furniture_mattress` receive lower ratings — these might suffer from quality, compatibility, or shipping damage issues.

**Fashion (Men's & Underwear):** Low-rated fashion segments could reflect sizing issues, material dissatisfaction, or unmet expectations.

**Safety & Utility:** `Construction_tools_safety` also performs poorly, potentially due to durability or compliance issues.

## State wise Analysis

### Visualization Summary:

Type: Donut Pie Chart

Metric: Total Sales (in Millions)

Breakdown by: `Seller_State`

Key insights: Top 10 categories

a) Highly Centralized Sales Distribution:

A single state contributes over 60% of the total sales, indicating a strong regional concentration of sellers and/or buyers.

This dominance creates dependency risk on one geographic zone for revenue flow.

b) Mid-tier Regional Support:

A few other states contribute between 7% to 9% each, acting as important secondary markets.

These regions present good opportunities for scalable growth and diversification.

#### c) Underutilized Markets:

Several states contribute less than 3% each, signaling potential for market development, seller onboarding, or customer acquisition strategies.

These regions are low-risk testing grounds for new marketing tactics or pilot operations.

Seasonal Sales Pattern (Yearly and Quarterly as well)

2016

Visualization Summary:

Key insights:

Q4 Dominance:

Nearly all revenue (99.39%) was generated in Quarter 4.

This indicates a highly seasonal business model, with the bulk of activity in the last quarter.

Negligible Q3 Contribution:

Only 0.35K in Q3, accounting for just 0.61% of annual revenue.

Suggests limited operations, demand, or product readiness during this period.

Seasonal Sales Pattern (Yearly and Quarterly as well)

2017

Visualization Summary:

Key insights:

Strong Year-Round Sales Distribution

All four quarters contributed meaningfully to revenue, showing a steady and balanced growth trend across the year.

2) Q4 Remains the Peak

Q4 generated 2.81M, the highest among all quarters ( $\approx 39.37\%$  of total revenue).

While Q4 is still dominant, its share is less extreme compared to 2016 (which was over 99%).

3. Growth Momentum from Q1 to Q4

Sales increased consistently from Q1 (0.86M) to Q4 (2.81M), indicating possible:

Seasonal market trends,

Progressive product rollout or marketing impact,

Stronger customer adoption later in the year.

Seasonal Sales Pattern (Yearly and Quarterly as well)

2018

Visualization Summary:

Key insights:

Q1 and Q2 Dominate Sales

Q1 (3.25M) and Q2 (3.33M) combined account for over 76% of the annual revenue.

This is a major shift from 2017 where Q4 led sales — now early-year performance is stronger.

2) Q3 Decline

Q3 contributes only 2.06M (23.85%), indicating a drop in sales momentum. Due to the following reasons:

Mid-year seasonality,

Reduced demand or campaign activity,

Shift in buyer behavior or internal capacity issues.

3) Overall Growth Trend

Despite missing Q4, 2018 shows higher total revenue (8.64M) than 2017 (7.14M), indicating strong business growth year-over-year.

The end of report