

Analysis Report

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Introduction

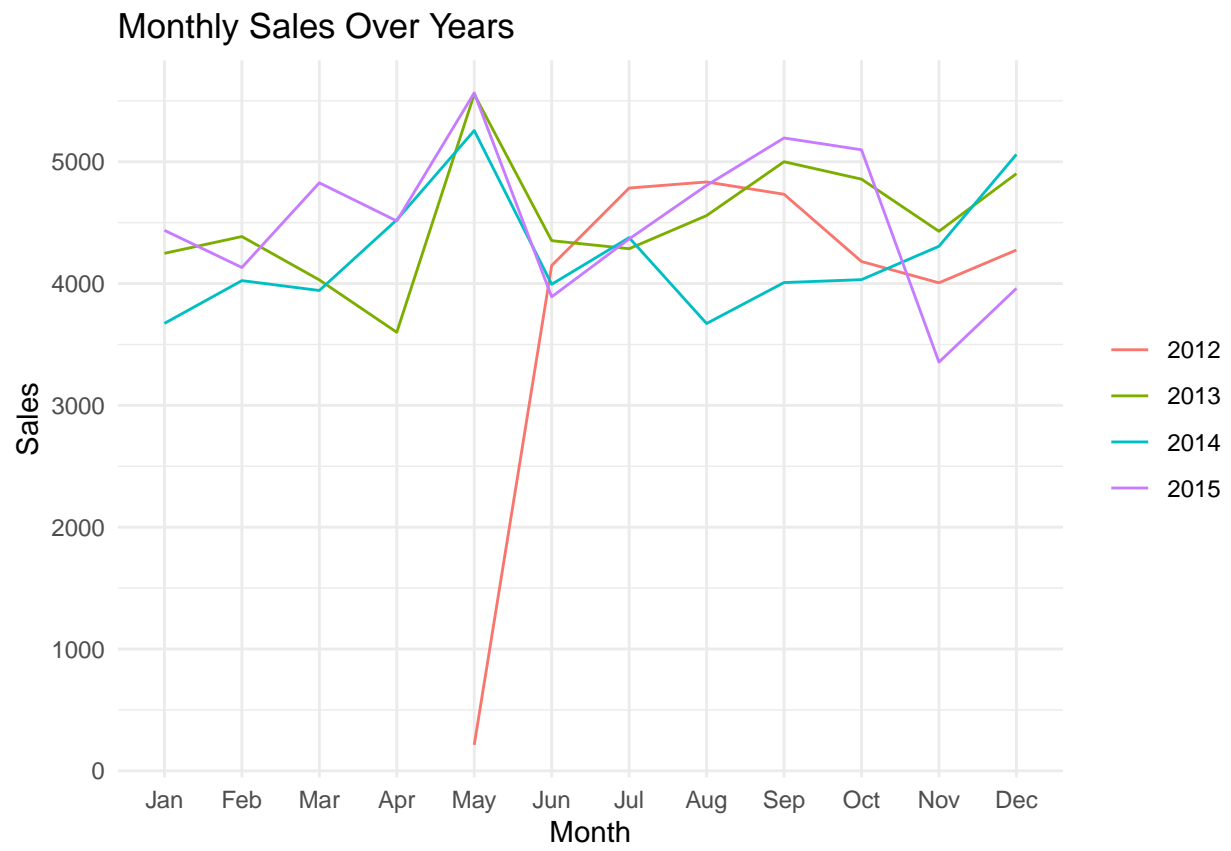
This report provides a detailed analysis of retail data to uncover trends, patterns, and insights that can inform business decisions.

Data Overview

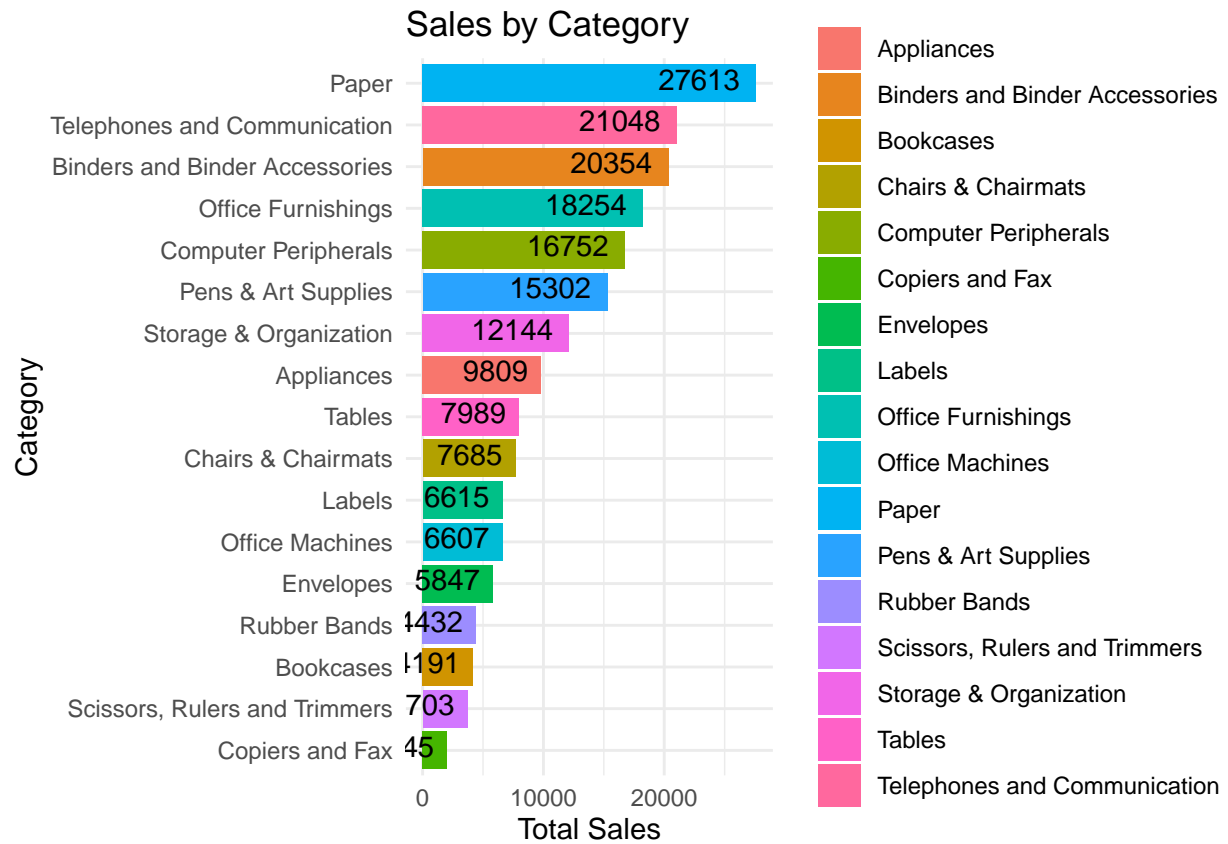
```
## Rows: 8,399
## Columns: 25
## $ city                <chr> "McKeesport", "Bowie", "Napa", "Montebello", "Nap~
## $ customer_age        <dbl> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, N~
## $ customer_name       <chr> "Jessica Myrick", "Matt Collister", "Alan Schoenb~
## $ customer_segment    <chr> "Small Business", "Home Office", "Corporate", "Co~
## $ discount            <dbl> 0.10, 0.08, 0.00, 0.08, 0.07, 0.09, 0.06, 0.05, 0~
## $ number_of_records   <dbl> 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1~
## $ order_date          <dtm> 2012-01-01, 2012-01-01, 2012-01-02, 2012-01-02, ~
## $ order_id            <dbl> 28774, 13729, 37537, 44069, 37537, 44069, 9285, 3~
## $ order_priority      <chr> "High", "Not Specified", "Low", "Critical", "Low"~
## $ order_quantity      <dbl> 32, 9, 4, 43, 43, 16, 3, 32, 4, 12, 29, 29, 15, 4~
## $ product_base_margin <dbl> 0.68, NA, 0.56, 0.39, 0.69, 0.40, 0.36, 0.59, 0.6~
## $ product_category    <chr> "Office Supplies", "Office Supplies", "Furniture"~
## $ product_container   <chr> "Small Box", "Large Box", "Jumbo Drum", "Wrap Bag~
## $ product_name        <chr> "Perma STOR-ALL Hanging File Box, 13 1/8\"W x 12~
## $ product_sub_category <chr> "Storage & Organization", "Storage & Organization~
## $ profit              <dbl> -111.8000, -342.9100, -193.0800, 247.7900, -1049.~
## $ region              <chr> "East", "East", "West", "West", "West", "West", "~
## $ row_id              <dbl> 4031, 1914, 5272, 6225, 5273, 6224, 1279, 5274, 5~
## $ sales               <dbl> 180.3600, 872.4800, 1239.0600, 614.8000, 4083.190~
## $ ship_date           <dtm> 2012-01-02, 2012-01-03, 2012-01-02, 2012-01-02, ~
## $ ship_mode           <chr> "Regular Air", "Express Air", "Delivery Truck", "~
## $ shipping_cost       <dbl> 4.69, 35.00, 48.80, 1.97, 45.00, 2.15, 2.99, 7.07~
## $ state               <chr> "Pennsylvania", "Maryland", "California", "Califo~
## $ unit_price          <dbl> 5.98, 95.99, 291.73, 15.04, 100.98, 9.11, 40.98, ~
## $ zip_code            <dbl> 15131, 20715, 94559, 90640, 94559, 90640, 55372, ~
```

Exploratory Data Analysis (EDA)

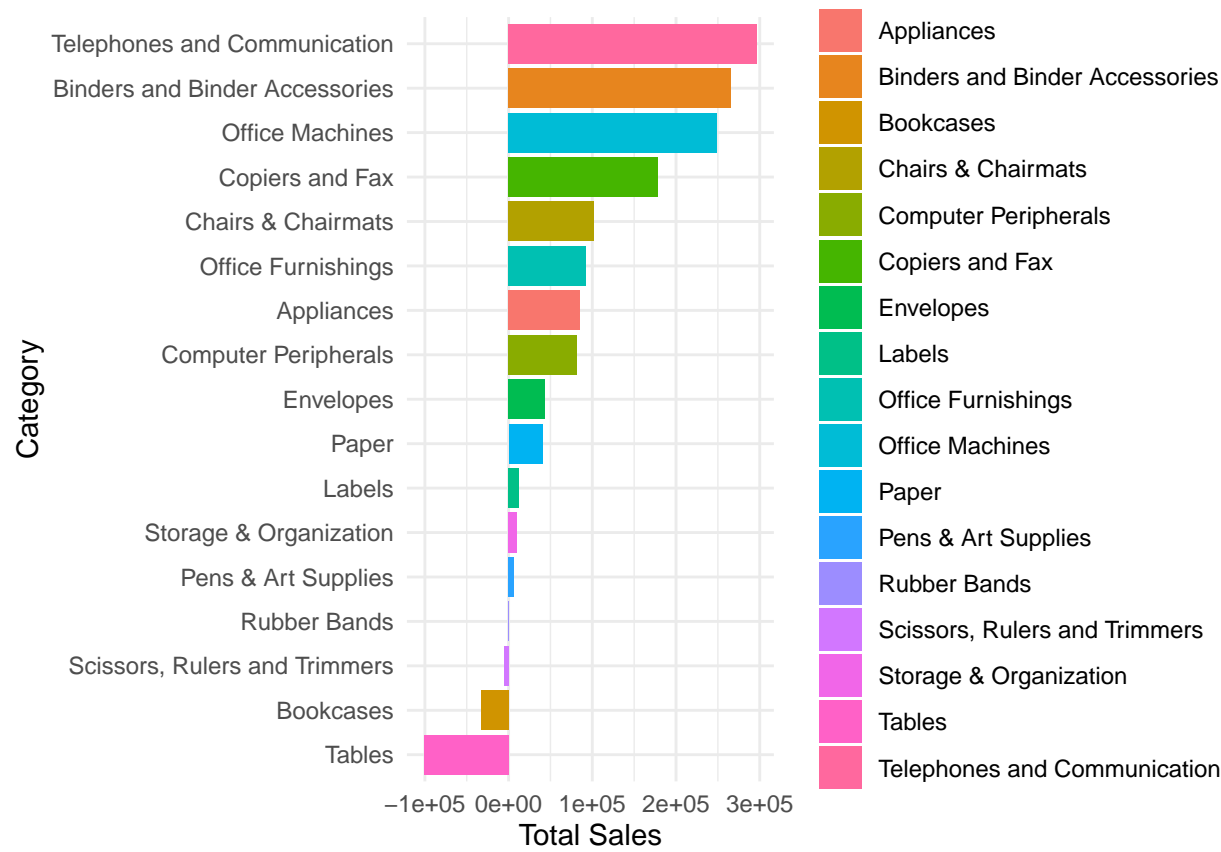
Sales Over Time



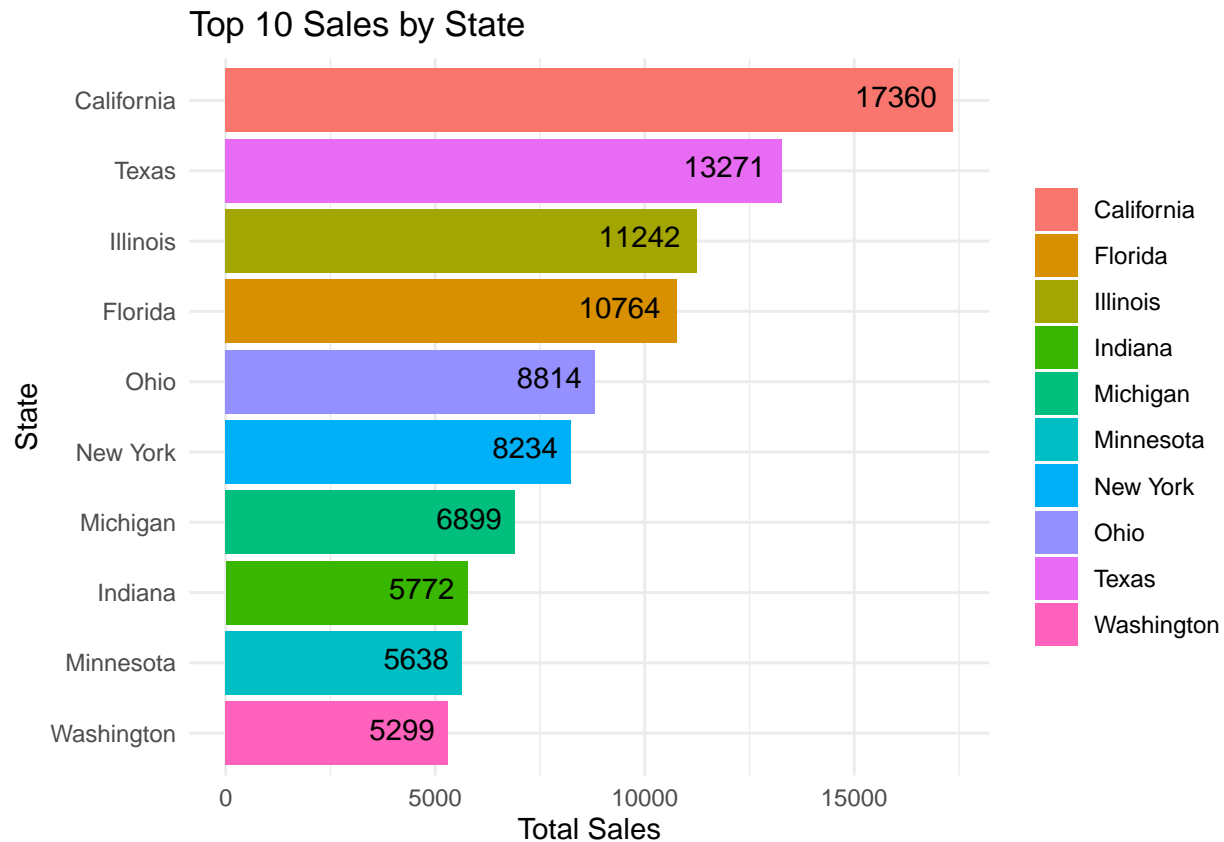
Sales by Category



Total Profit by Category



Top 10 States with the Most Order



Key Insights

Summary of Findings

- **Sales Trends:** Monthly sales show a fluctuating trend, with the highest peak in May each year.
- **Top Categories:** Categories such as “Paper”, “Phones and Communications”, and “Binders and Binders Accessories” contributed the most to overall sales.
- **Top Profit:** Categories such as “Telephone and Communications” and “Fastening and Fastening Accessories” are the top 2 categories with the highest profits. Even though “Paper” is the category with the highest sales, it does not make “Paper” the category with the highest profits.
- **Loss Category:** There are 3 categories that are losing money, namely “Scissors, Rulers and Trimmers”, “Bookshelves”, and “Tables”.
- **Most Orders State:** California is the state with the most orders.

Recomendations

- **Focus on High-Profit Categories:** Increase marketing and inventory for top-profit categories to maximize sales.
- **Product Strategy:** Consider promoting your best-selling products more aggressively.
- **Investigate some things further:** Conduct further investigation to find out the causes of fluctuating sales and loss-making categories.

Conclusion

This retail analysis report provides valuable insights into sales trends and product performance. By leveraging these insights, the company can make informed decisions to drive growth and profitability.