



Regional Sales Analysis



Problem Statement

- Sales teams often lack a clear, data-driven understanding of regional performance.
- This makes it difficult to identify growth opportunities and optimize resources.
- Goal: Analyze and visualize regional sales data to uncover trends, evaluate profitability, and support strategic decision-making.

Approach

Collected and processed 5 years of sales data.

Conducted Exploratory Data Analysis (EDA) using Python (pandas, matplotlib, seaborn).

Created visualizations to identify trends, regional performance, and channel profitability.

Generated KPIs and actionable insights to guide strategy.

Data Overview

- 64,104 transactions spanning years 2014-2018.
- Key fields: Order Date, State, Region, Revenue, Cost, Profit, Margin %, Channel, Product.
- Geographic coverage: All U.S. regions and states.
- Rich detail across customers, products, and sales channels.

Project Workflow

- 1. Data Collection & Cleaning
- 2. Exploratory Data Analysis (EDA)
- 3. Visualization of Key Metrics
- 4. KPI Dashboard Creation
- 5. Strategic Insight Development
- 6. Recommendations

Exploratory Data Analysis (EDA)

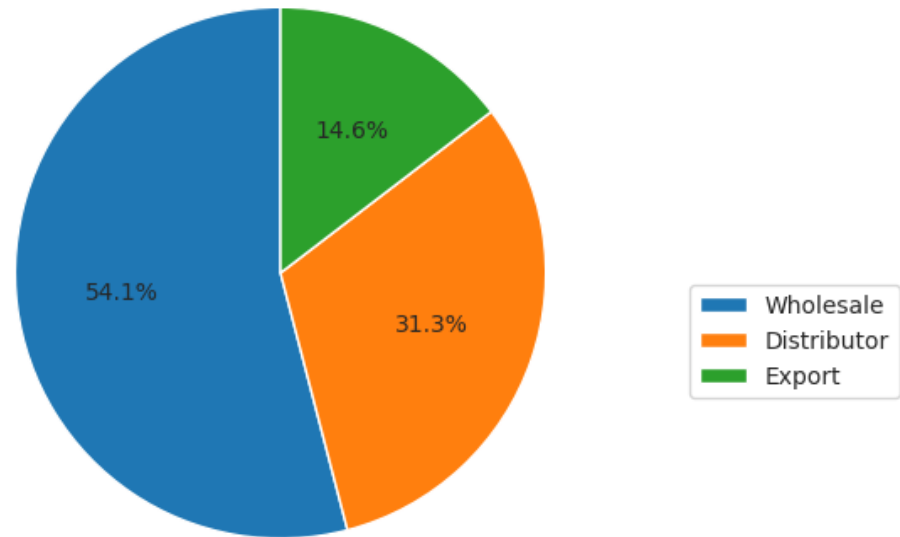
- Regional revenue & profit trends highlight West as top-performing region.
- Seasonality observed: peaks in May, Aug, Nov, Dec; dips in Feb and Apr.
- Top products (26 & 25) dominate sales, showing concentration risk.
- Wholesale channel is largest contributor; Export has highest margin.
- California leads state-level orders, followed by Illinois, Florida, and Texas.

Revenue Share by Channel

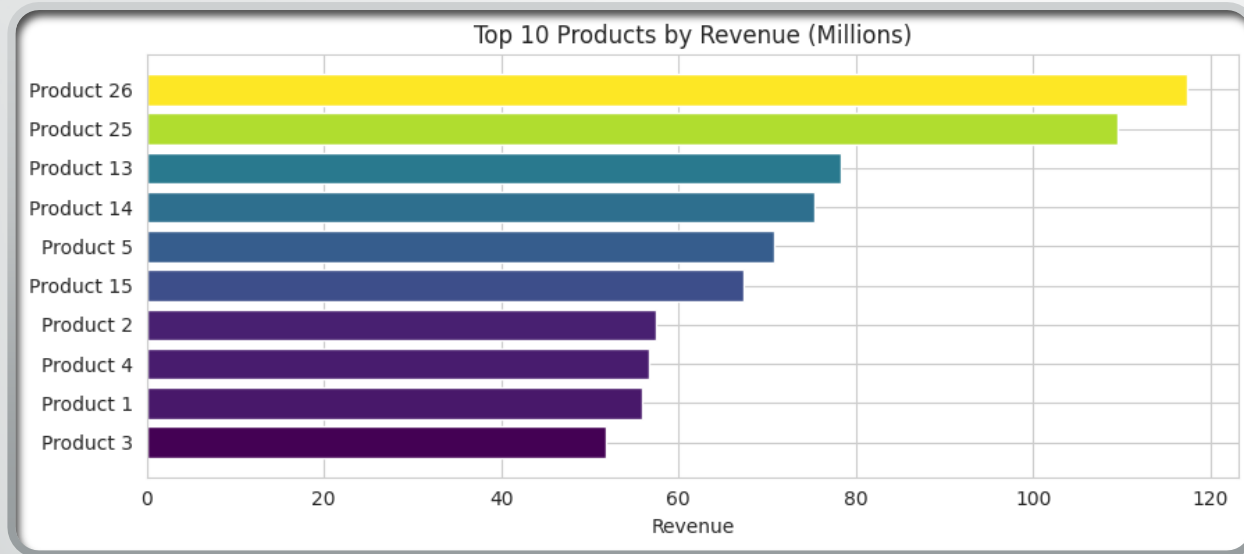
Key Insights

- The pie chart shows that Wholesale is the biggest contributor with revenue of \$668 million.
- Second biggest contributor is Distributor with \$387 million in revenue.
- Exports can provide growth opportunities in international markets this can diversify the company and reduce ri

Revenue Share by Channel



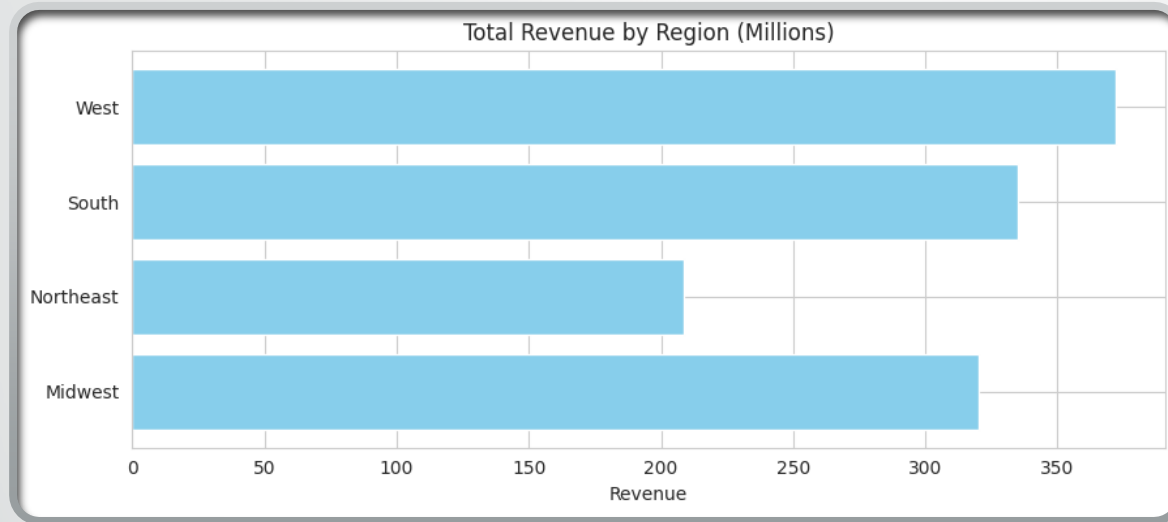
Top 10 Products by Revenue



Key Insights

- Product 26 and 25 are strong leaders with revenue for Product 26 being \$117 million and for product 25 being \$109 million. This makes up 18% of total company revenue.
- If any demand of the top 5 products fall it can significantly impact revenue.
- Product 1-4 grouped together are showing revenue but looking at individually they do not rival the top 2 products.

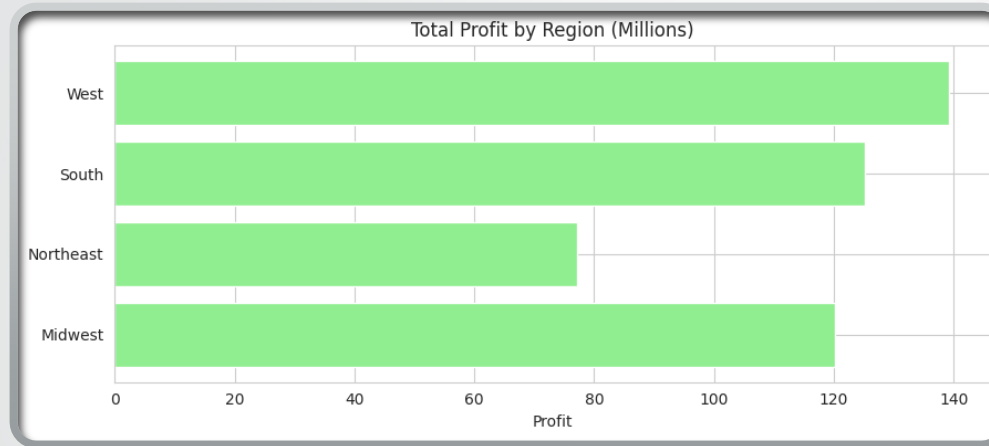
Top Revenue By Region



Key Insights

- Based on both charts the West region leads in both revenue \$372 million and profit of \$139 million.
- The South and Midwest regions demonstrate in being strong contributors.
- The Northeast region demonstrates weak contribution and can be a region to focus on to increase business profit and revenue.

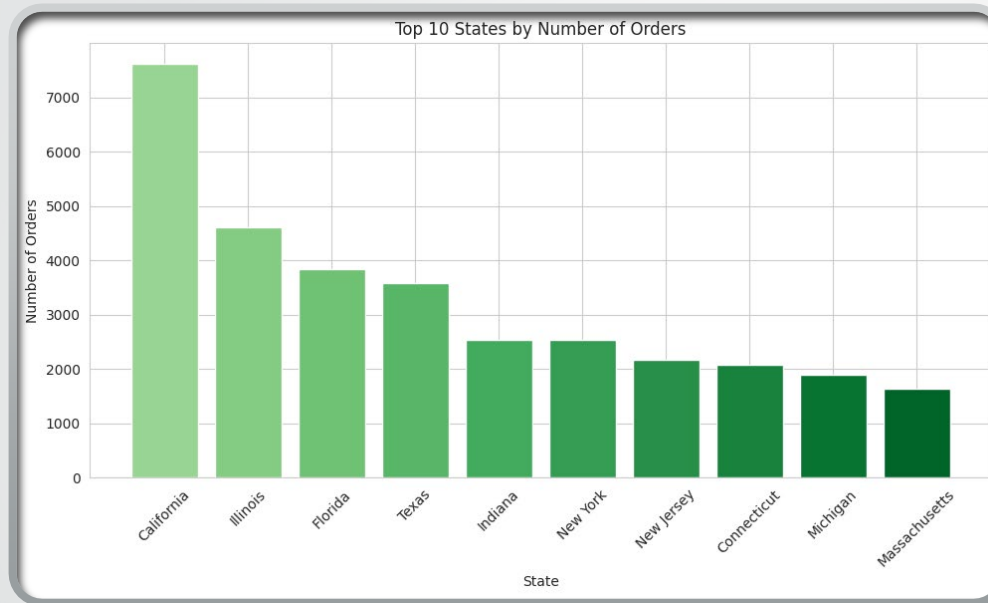
Top Profit By Region



Key Insights

- Based on both charts the West region leads in both revenue \$372 million and profit of \$139 million.
- The South and Midwest regions demonstrate in being strong contributors.
- The Northeast region demonstrates weak contribution and can be a region to focus on to increase business profit and revenue.

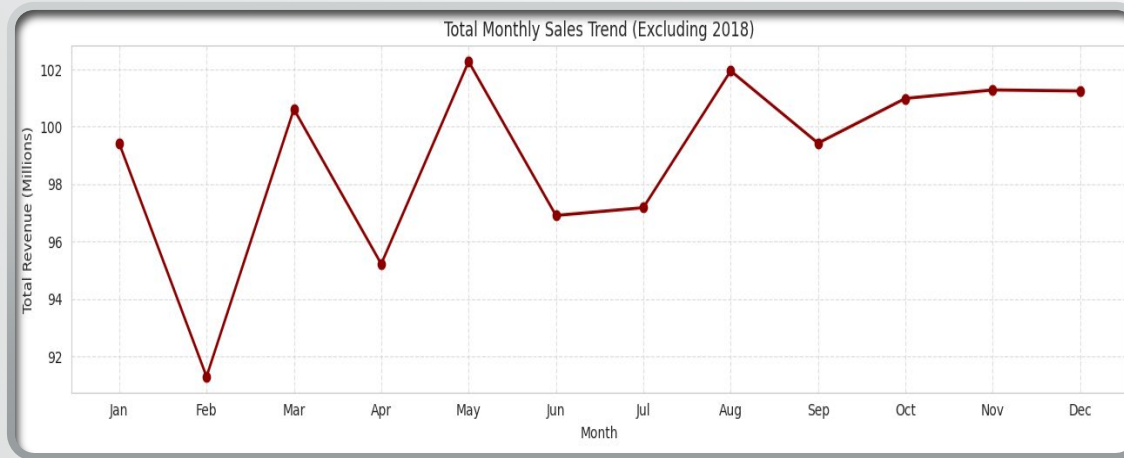
Top 10 States by # of Orders



Key Insights

- California has the highest number of orders with orders of 7,613, California is critical to maintain service levels and competitive positioning
- States like Illinois, Florida, and Texas are also strong markets

Total Monthly Sales Trend



Key Insights

- The strongest month is May with \$102.3 million
- The weakest month is February with \$91.3 million, which shows a demand dip and can be caused by post-holiday slowdowns.
- The months of November and December remain strong, which marketing, promotions, and inventory stocking should be prioritized in these months.
- For weak periods like in February and April, special promotions or targets campaigns to increase demand.

Key Insights

- Total Revenue: \$1.24B | Profit: \$462M | Avg Margin: 37%.
- West region leads; Northeast underperforms.
- Seasonal peaks in May and Nov-Dec; demand dips in Feb-Apr.
- Heavy reliance on top 5 products (~37% of revenue).
- Wholesale channel dominates; Export offers growth potential.
- California is the single largest state market.

Recommendations

- Strengthen core presence in West & South; unlock value in Northeast.
- Diversify product portfolio beyond top SKUs to reduce risk.
- Optimize Wholesale channel and scale Export strategically.
- Leverage seasonality: promotions in low-demand months; maximize holiday surges.
- Expand market share in key states like California, Illinois, Florida, Texas.
- Continue leveraging data-driven insights for strategic decisions.