

Case 1: Sales Analysis for a Retail Chain

Scenario:

A retail chain wants to analyze its sales data to make informed decisions. They have provided data on sales, products, customers, and regions.

Tasks:

1. Load the sales dataset into Power BI.
2. Clean and transform the data by removing null or erroneous entries.
3. Create relationships between tables (e.g., Sales, Products, Customers, Regions).
4. Create a sales trend line for the past 12 months.
5. Generate a bar chart showing top 10 products by revenue.
6. Create a map visualization of sales by region.
7. Develop a pie chart of sales distribution across product categories.
8. Use DAX to calculate the total sales and total profit for each product.
9. Build a slicer to filter data by year and quarter.
10. Create a KPI card to display total revenue, profit margin, and customer count.
11. Analyze customer demographics (e.g., age groups, gender distribution).
12. Identify the least-performing regions and their contributing factors.
13. Develop a dashboard summarizing sales trends, key products, and regional performance.
14. Publish the report to Power BI Service.
15. Share the report link with stakeholders and configure row-level security.

Sales Report Dashboard

Electronics

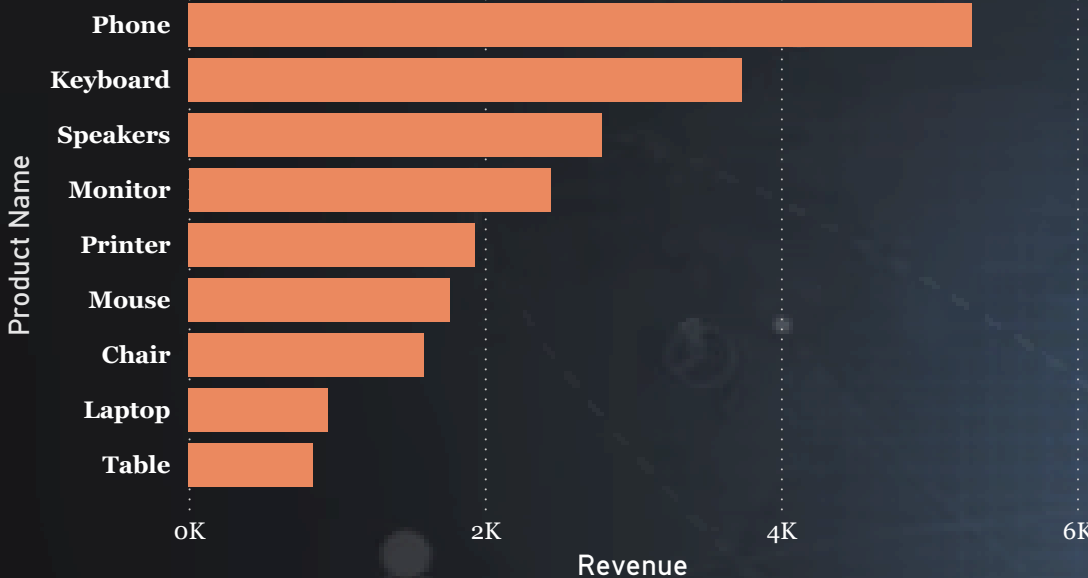
Furniture

Califor...

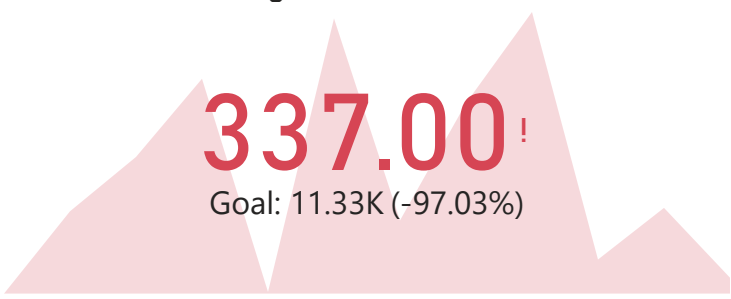
Florida

New
York

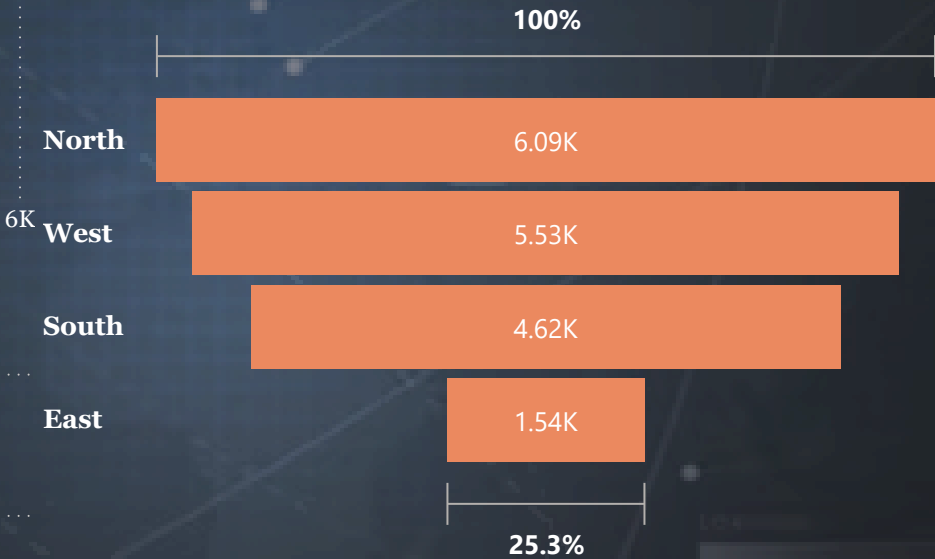
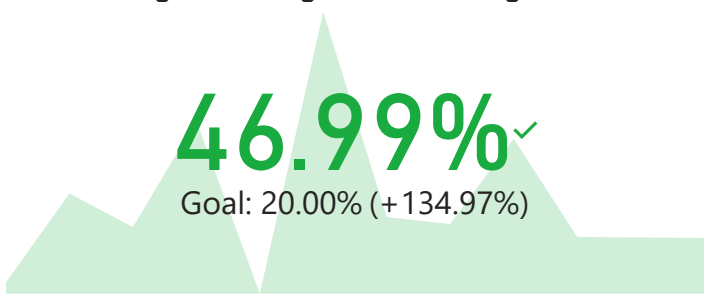
Texas



Total Sales vs Target Sales



Profit Margin vs Target Profit Margin



3.55K

Sum of Profit

10

Customer Count

At 3378, September had the highest Sum of TotalSales and was 2,079.35% higher than January, which had the lowest Sum of TotalSales at 155.

September accounted for 18.99% of Sum of TotalSales.

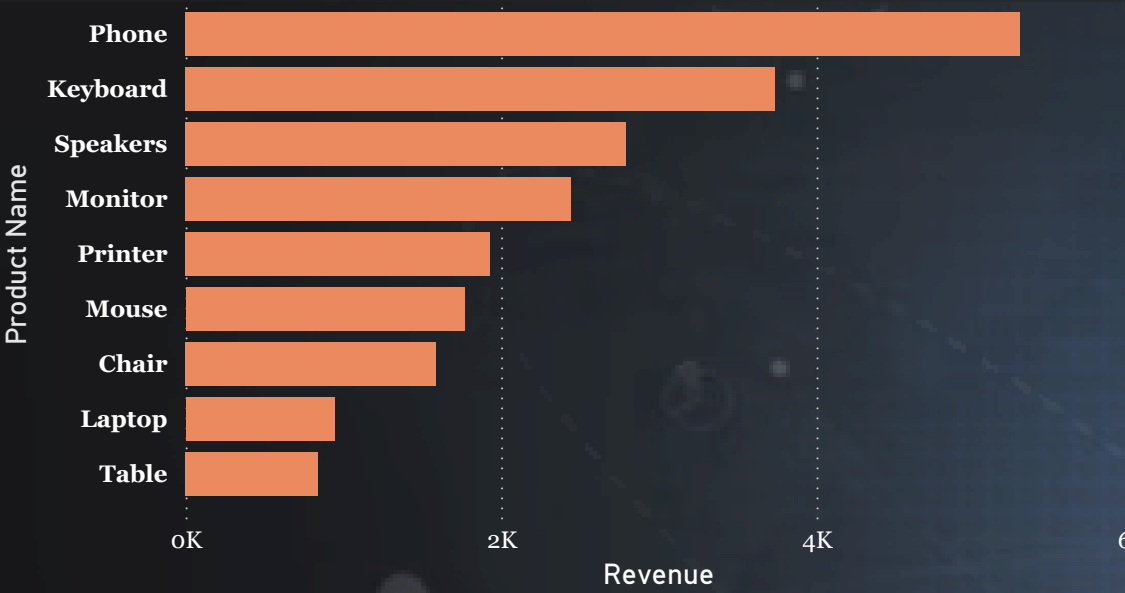
Across all 12 Month Name, Sum of TotalSales ranged from 155 to 3378.

At 17786, Sum of TotalSales has exceeded the target goal of 11,328.50.

→ Next

Sales Report Dashboard

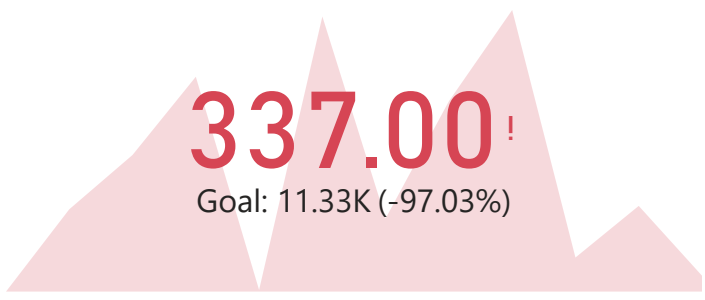
East	North	South	West	Califor...	Florida	New York	Texas
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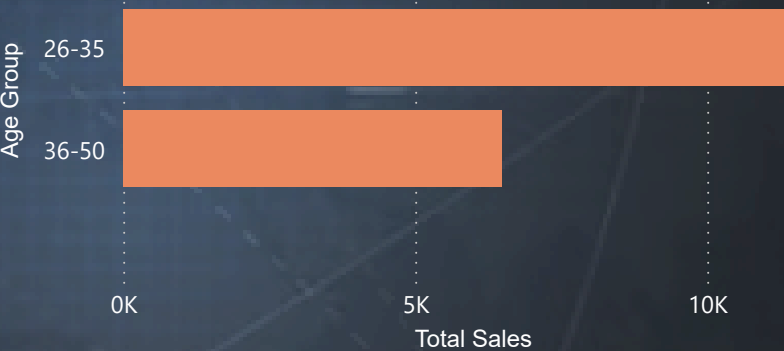
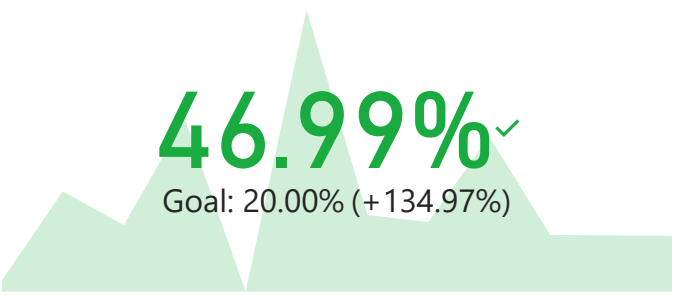
Region ● East ● North ● South ● West



Total Sales vs Target Sales



Profit Margin vs Target Profit Margin



Summary

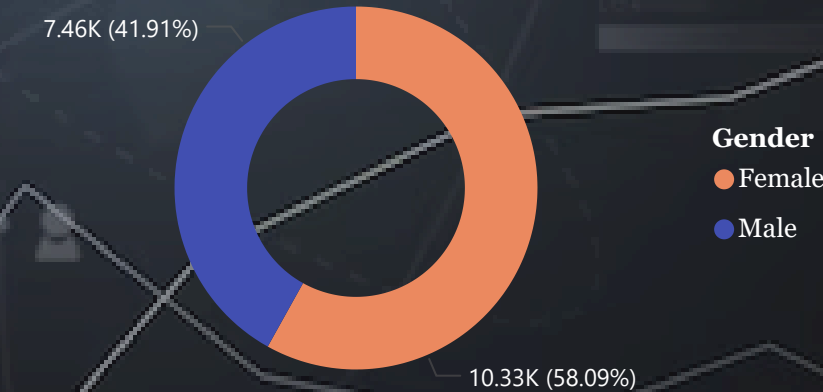
At 5,289.10, Phone had the highest Revenue and was 530.89% higher than Table, which had the lowest Revenue at 838.36.

Phone accounted for 24.79% of Revenue.

Across all 9 Product Name, Revenue ranged from 838.36 to 5,289.10.

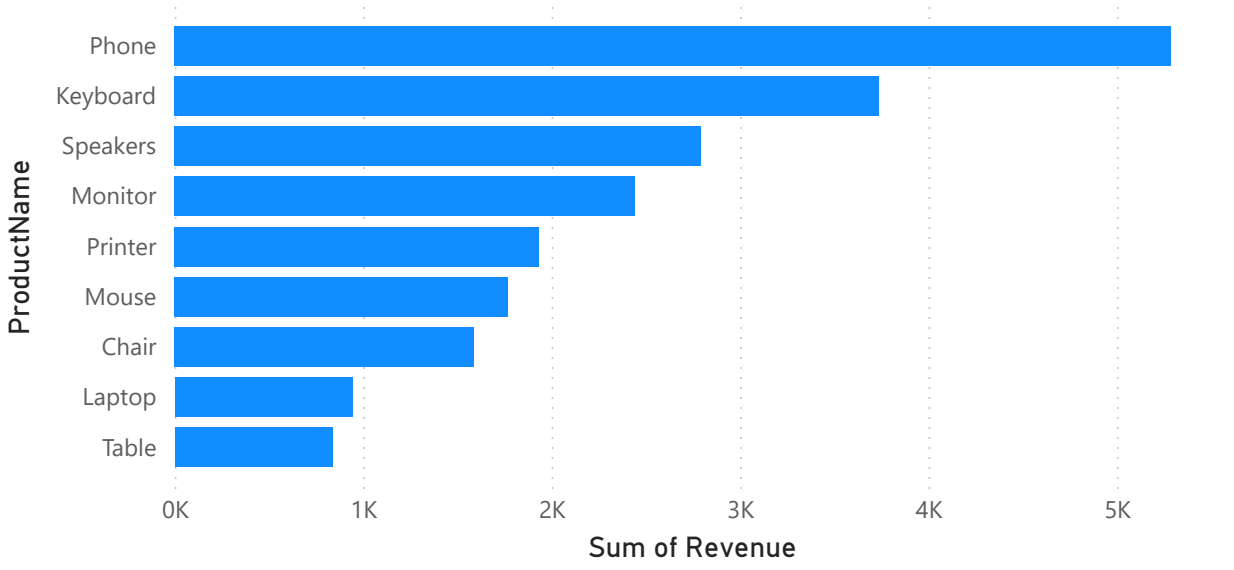
New York in Region North made up 34.26% of Sum of TotalSales.

At 17786, Sum of TotalSales has exceeded the target goal of 11,328.50.

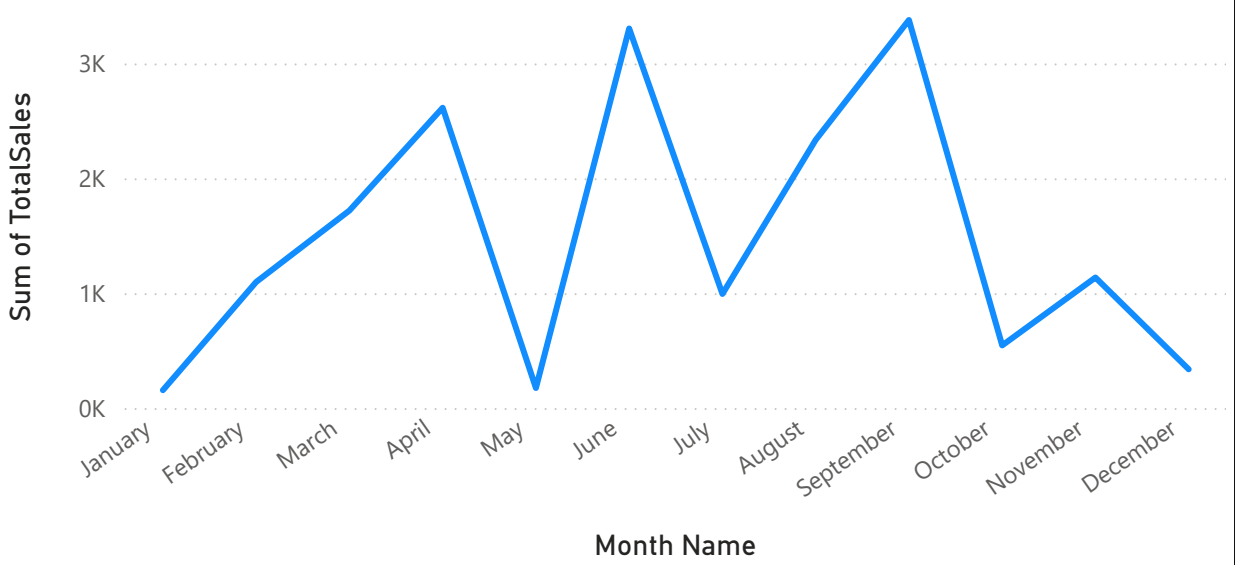


←Back

Sum of Revenue by ProductName



Sum of TotalSales by Month Name

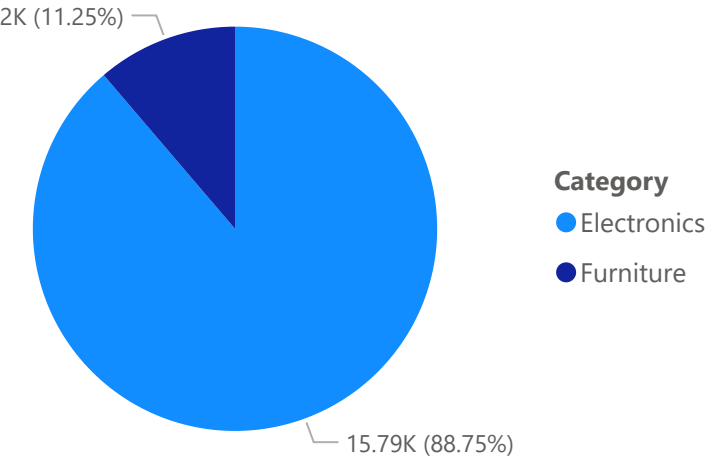


Sum of TotalSales by State and Region

Region East North South West



Sum of TotalSales by Category



State



Year



Sum of TotalSales and Sum of TargetSales by Month Name

337.00!

Goal: 135.94K (-99.75%)

Sum of Profit Margin and Sum of Profit Margin by Month Name

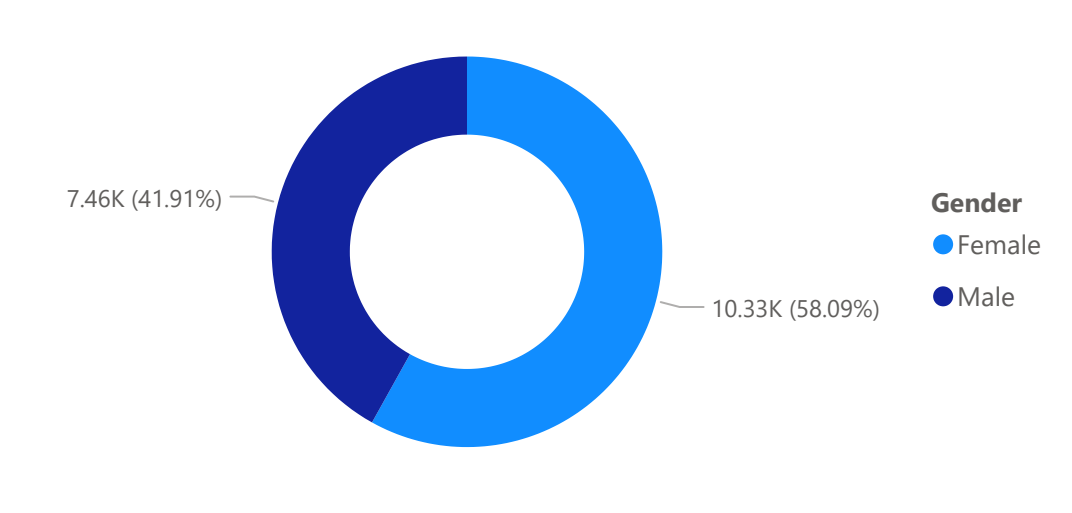
46.99%!

Goal: 240.00% (-80.42%)

10

Count of CustomerID

Sum of TotalSales by Gender



State

California

Florida

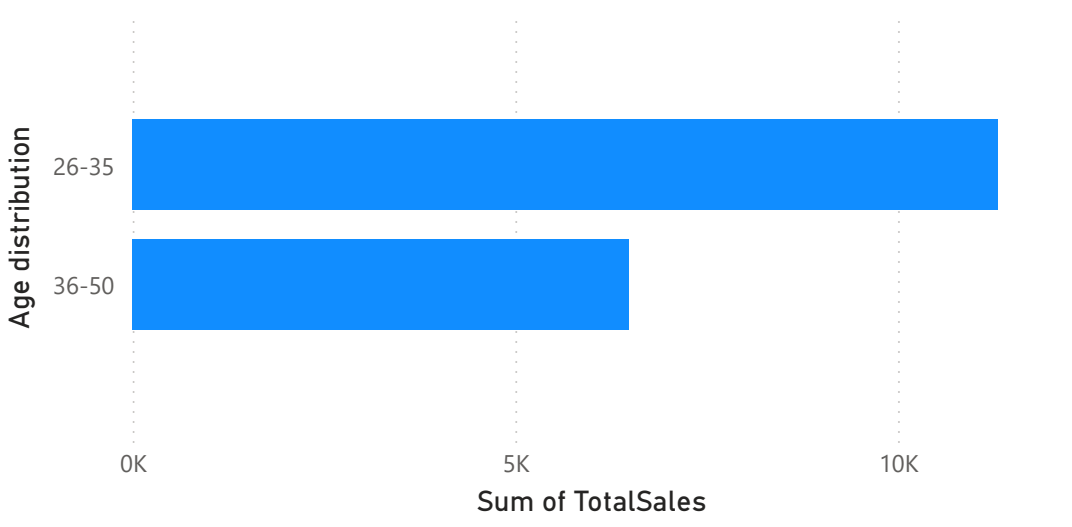
New York

Texas

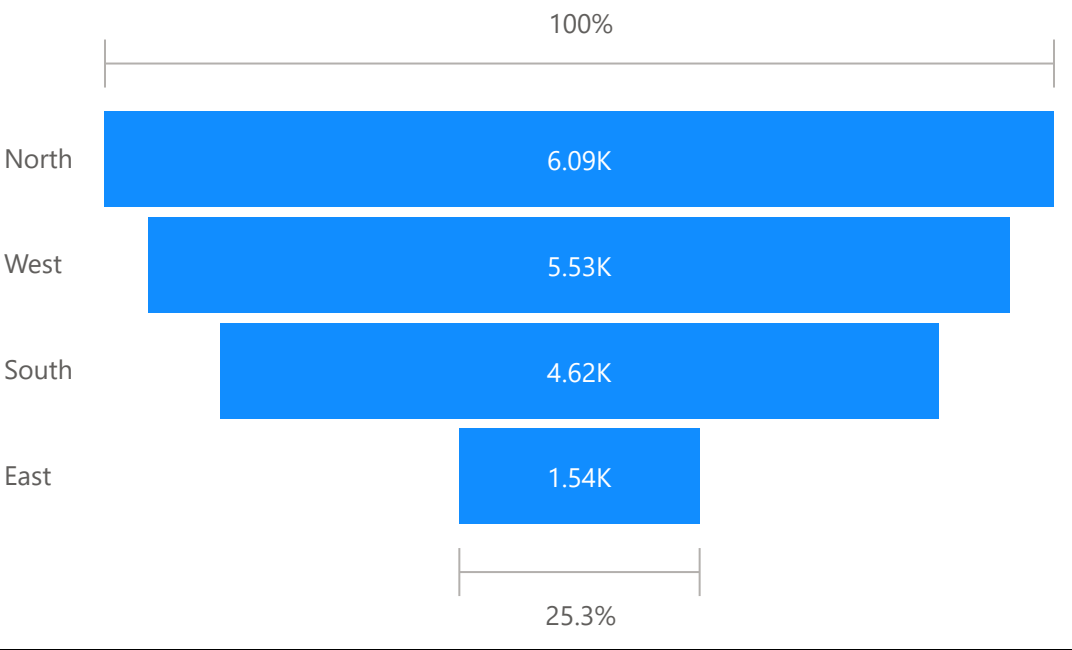
Year

2023

Sum of TotalSales by Age distribution

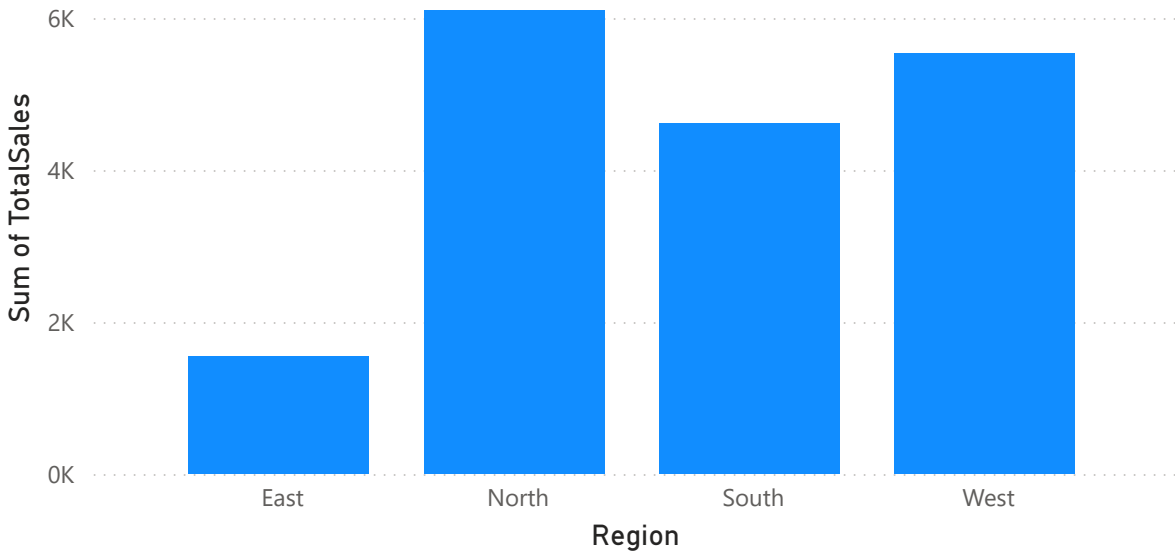


Sum of TotalSales by Region





Sum of TotalSales by Region



Total Sum of TotalSales was higher for [Electronics](#) (15785) than [Furniture](#) (2001).

[North](#) in Category [Electronics](#) made up [34.26%](#) of Sum of TotalSales.

Average Sum of TotalSales was higher for [Electronics](#) (3,946.25) than [Furniture](#) (667).

Sum of TotalSales for [Electronics](#) and [Furniture](#) diverged the most when the Region was [South](#), when [Electronics](#) were [3932](#) higher than [Furniture](#).