

Amazon Sales Data Analysis

The Amazon logo, featuring the word "amazon" in a white, lowercase, sans-serif font, with a blue curved arrow underneath it, all set against a black rectangular background.

By Tarush Tanwar

Introduction

Amazon.com is an international e-commerce company that offers online retail, computing services, consumer electronics, digital content, and other local services such as daily deals and groceries. Headquartered in the United States, Amazon hit nearly 514 billion U.S. dollars in net sales revenue worldwide in 2022. Most of the company's revenue is [generated through e-retail sales of different categories of products](#), followed by third-party seller revenues, retail and media subscriptions, and [AWS cloud services](#). Due to its global scope and reach, Amazon is considered one of the [most valuable brands worldwide](#).



Project Title	Analyzing Amazon Sales Data
Technologies	Data Science
Domain	E-Commerce
Project Difficulties Level	Advanced

Resources

Name : Amazon Sales data

Dataset : [Download Dataset](#)

Amazon Sales Data Analysis

Problem Statement



Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce cost and to increase profits. Sales management today is the most important function in a commercial and business enterprise.

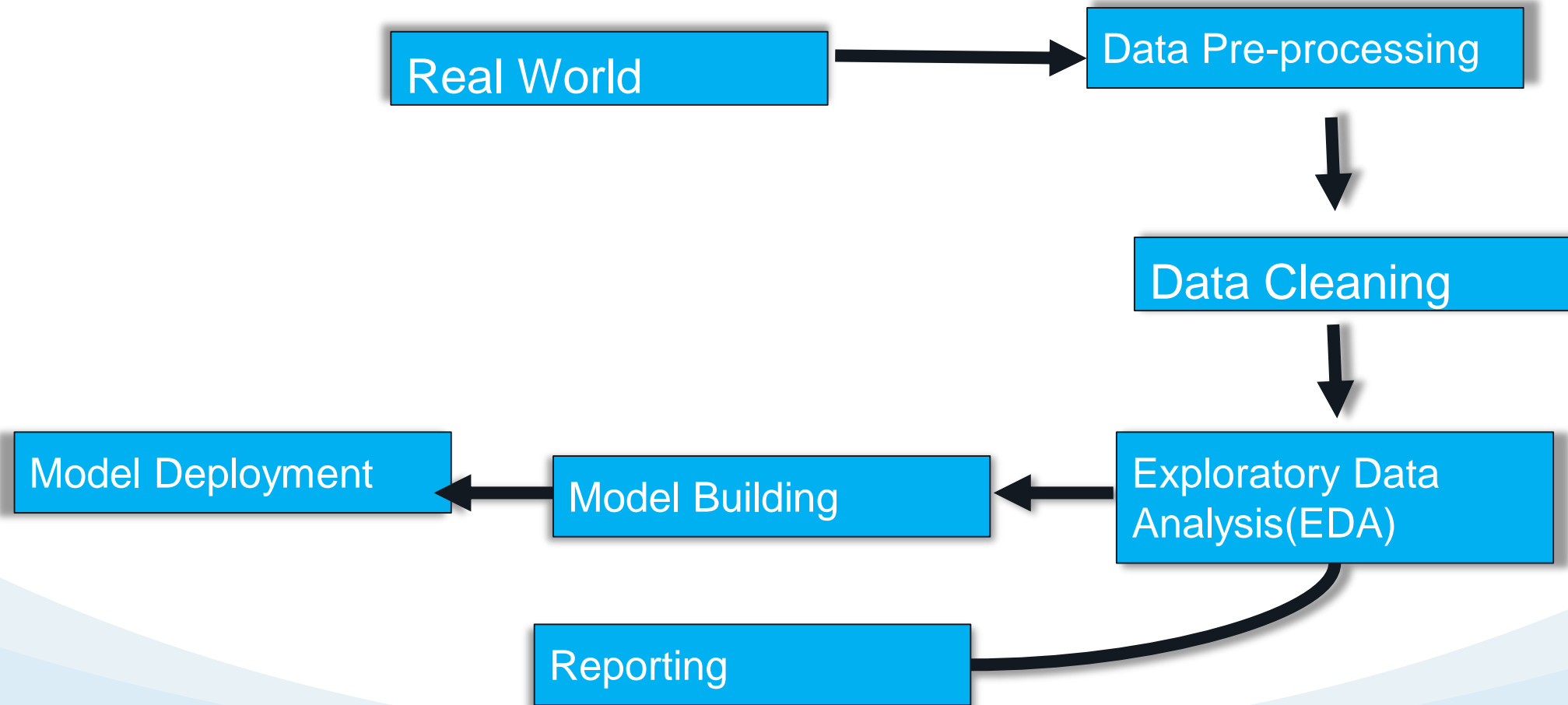
KPIs: ETL: Extract-Transform-Load



To Do

- ETL: Extract: Transform-Load some Amazon dataset
- Find Sales-trend -> month-wise, year-wise, yearly_month-wise
- Find key metrics and factors
- Show the meaningful relationships between attributes.

Architecture



Architecture Description



Raw Data Collection : The Dataset Provided by CollegeRanker Platform.



Data Pre-Processing : Before building any model, it is crucial to perform data pre-processing to feed the correct data to the model to learn and predict. Model performance depends on the quality of data fed to the model to train.



Data Cleaning : is the process of fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within a dataset.

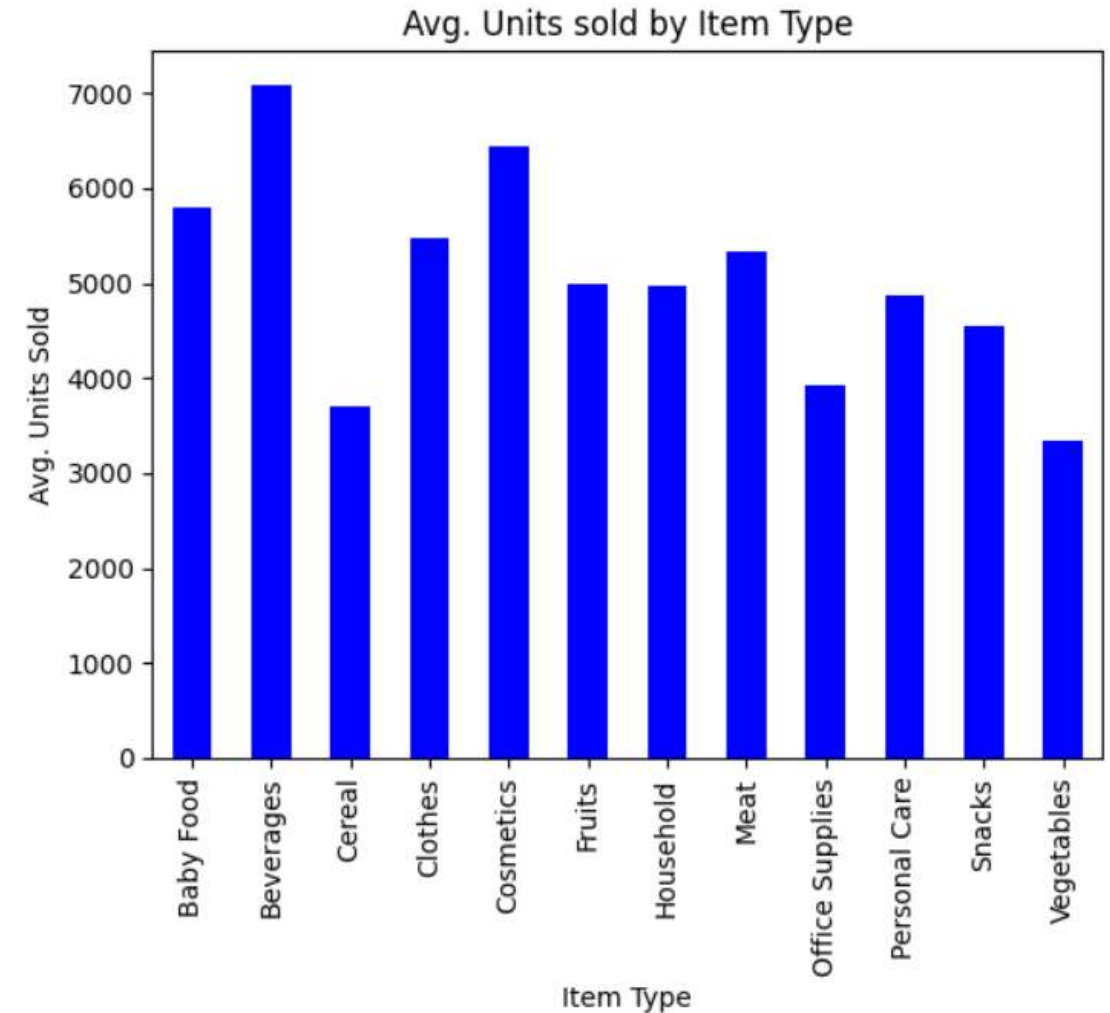


Exploratory Data Analysis (EDA) : refers to analyze and investigate data sets and summarize their main characteristics, often employing data visualization methods.

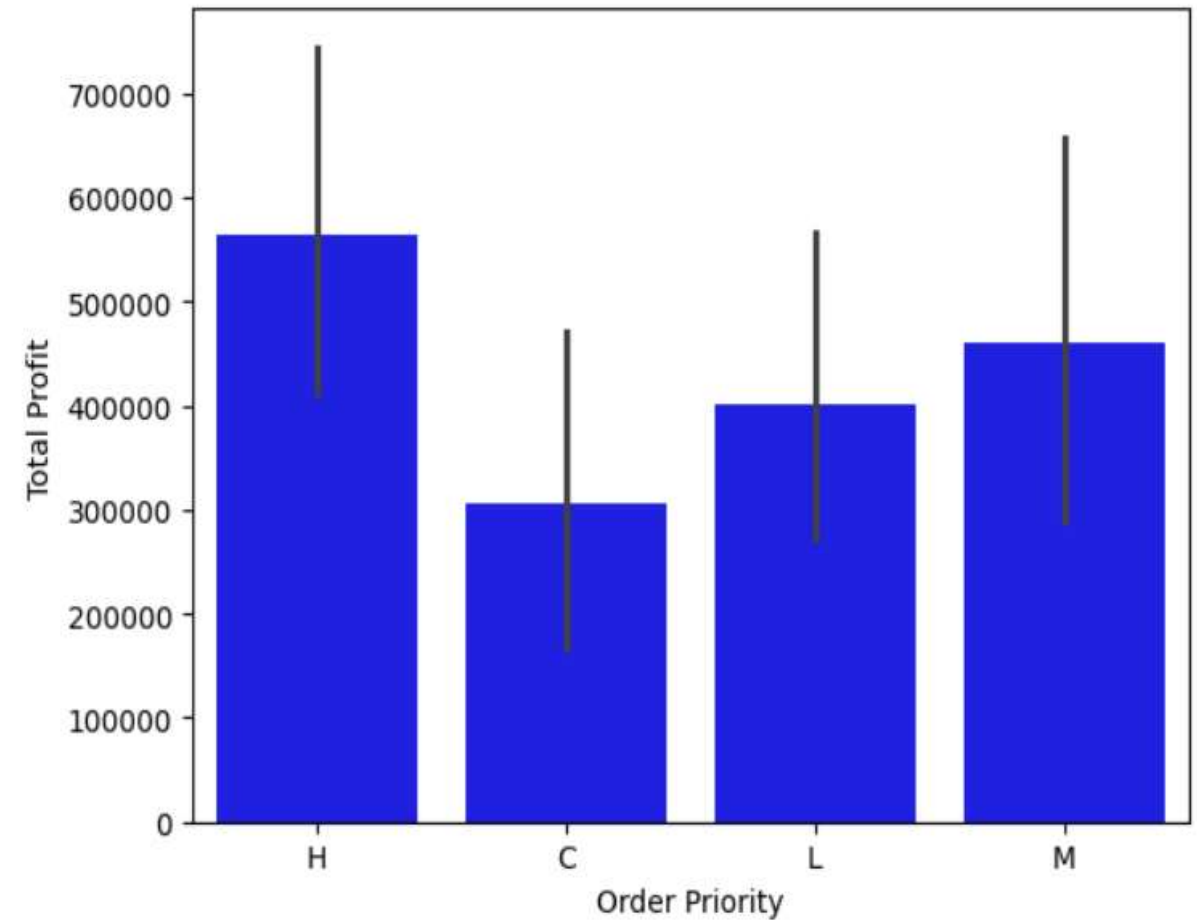
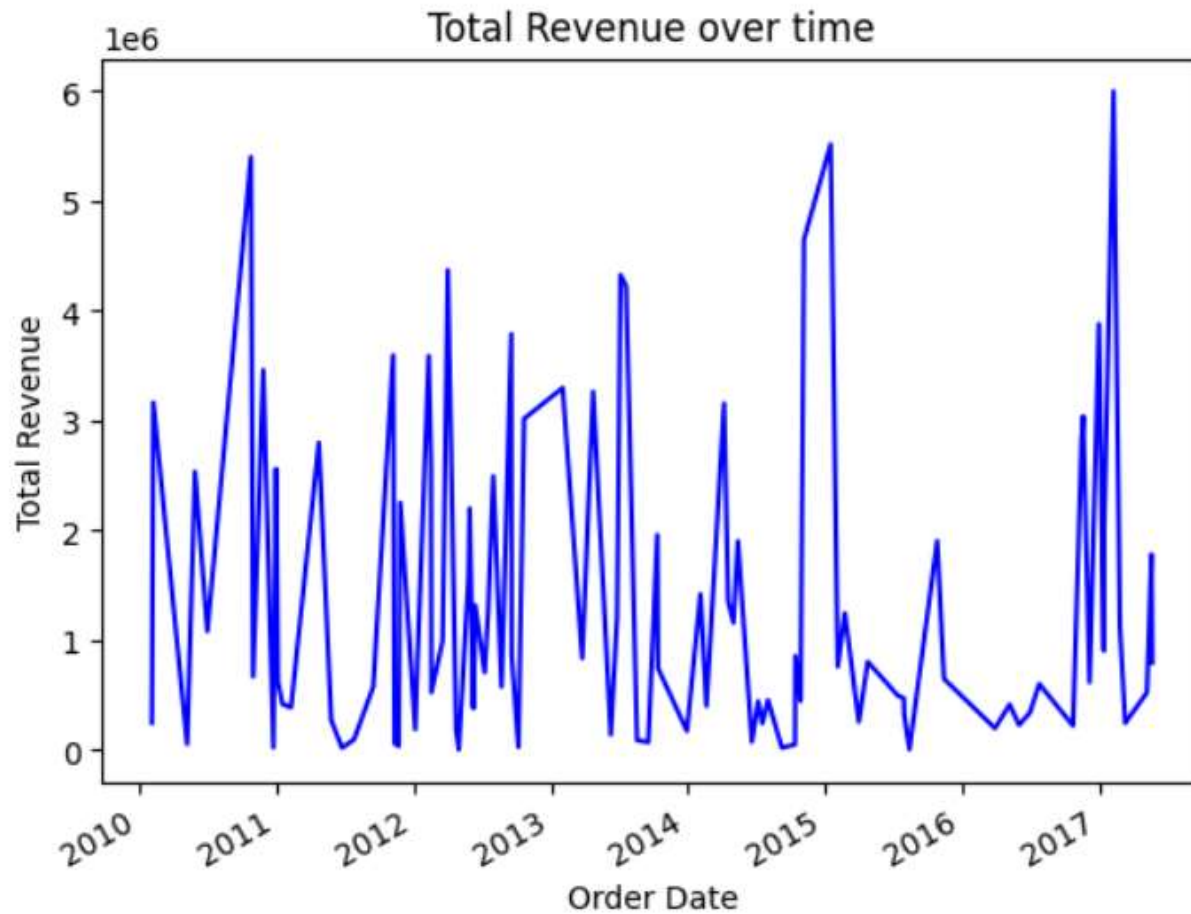


Reporting : is the process of collecting and formatting raw data and translating it into a digestible format to assess the ongoing performance of your organization.

Analysis using Python



Analysis using Python



Analysis using Python

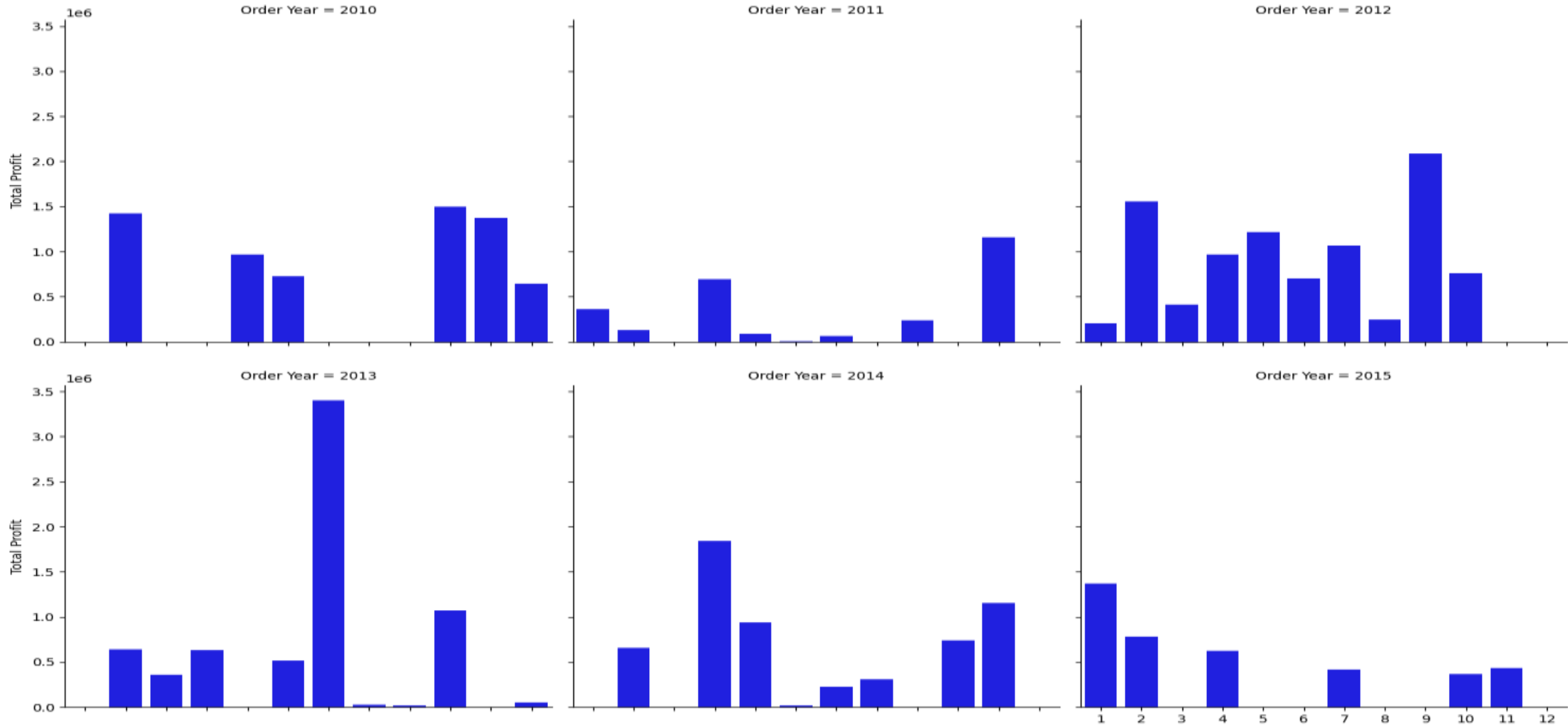


Tableau Dashboard



Sales Channel

Offline

276.78K

Online

236.09K

NEXT

Total Profit

44.17M

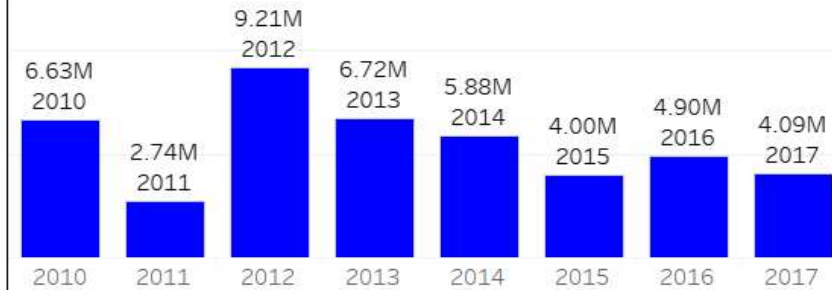
Total Units Sold

512.87K

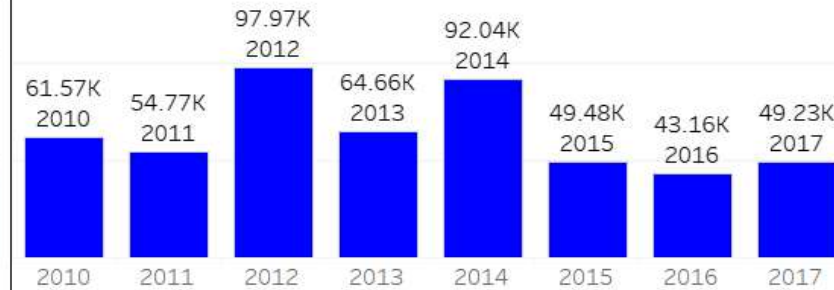
Total Cost

93.18M

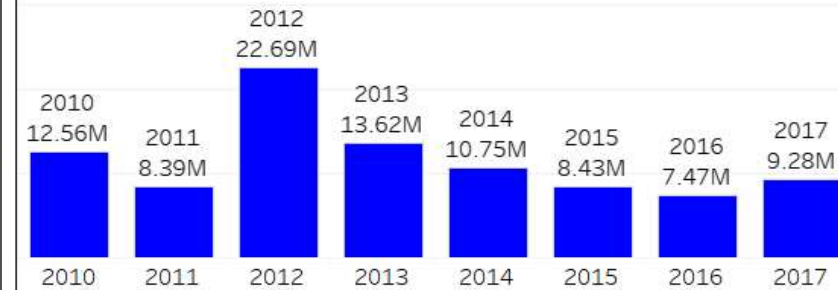
Profit Bar



Total Units sold Bar



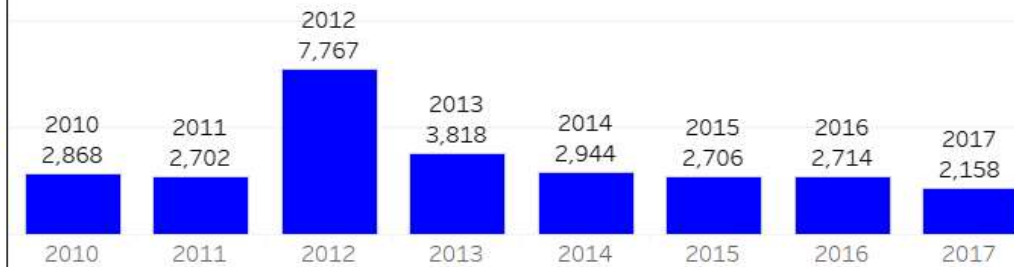
Total Cost Bar



Unit Price

27.68K

Unit Price Bar



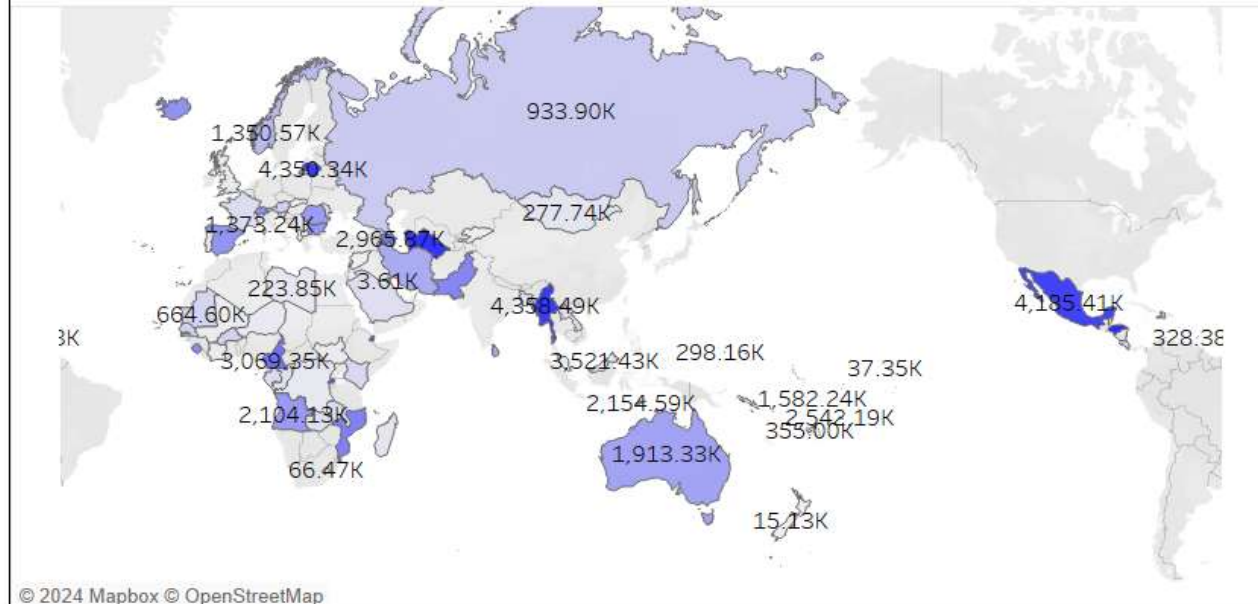
Unit Cost

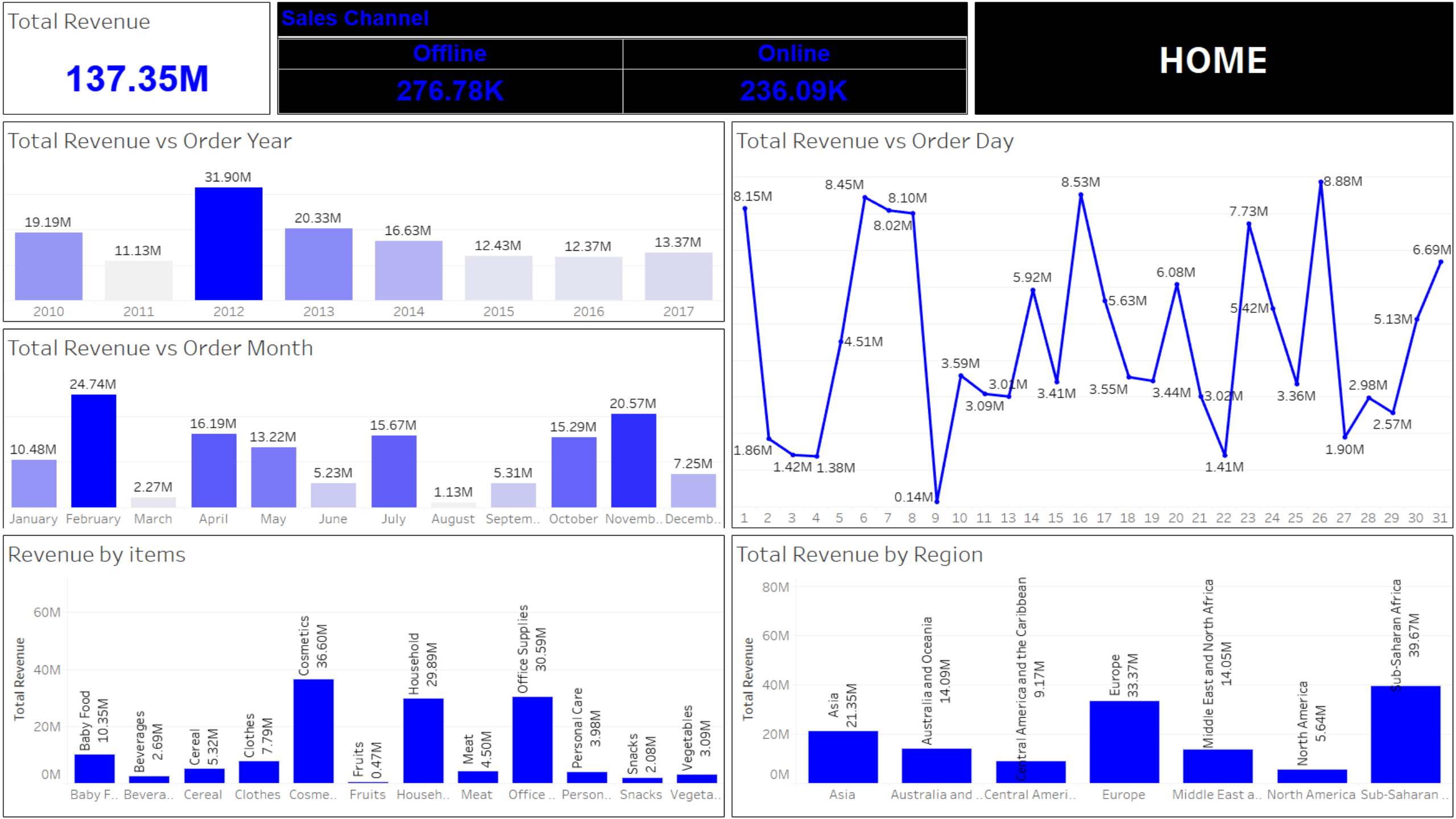
19.10K

Unit Cost Bar



Total Cost vs Country





Insights



Financial Performance

- **Total Sales and Profit:** With total sales of \$137.35 million and a profit of \$44.17 million, the business has a profit margin of approximately 32.14%, indicating a healthy profit generation from its sales activities.
- **Average Profit Margin:** The average profit margin per unit is \$32.16. This figure helps in understanding the profitability per product sold.
- **Average Unit Price:** With an average unit price of \$276.76, the business is likely dealing with mid to high-range products.

Sales Channels and Customer Preferences

- **Order Priority:** The highest sales from “H” order priority indicate a strong customer demand for fast delivery. This suggests the importance of maintaining efficient logistics and supply chain operations to meet this need.
- **Sales by Product Category:** “Cosmetics” leading in sales could be due to high consumer demand, possibly driven by trends, brand loyalty, or effective marketing strategies in this category.
- **Sales Channels:** The preference for “Offline Channel” suggests that customers might value the in-store experience, personal interaction, or immediate product availability.

Insights



Temporal and Regional Trends

- Yearly Sales Performance: The peak sales in 2012 could be analyzed further to understand the factors that contributed to this spike (e.g., economic conditions, product launches, marketing campaigns).
- Regional Sales: The highest sales in the Sub-Saharan Africa region could be indicative of emerging markets, increased disposable income, or effective market penetration strategies in these areas.

Strategic Implications

- Enhance Delivery Speed: Given the high sales associated with the “H” order priority, investing in logistics to ensure fast delivery could further boost sales and customer satisfaction.
- Focus on Cosmetics: Strengthening the product range, marketing, and distribution of cosmetics can capitalize on this high-demand category.
- Optimize Offline Sales: Improving the in-store experience, expanding offline retail presence, and integrating online-offline shopping experiences could leverage the preference for offline channels.
- Analyze Peak Year Strategies: Understanding what drove the peak sales in 2012 can provide insights for replicating successful strategies in future planning.
- Expand in Sub-Saharan Africa: Tailoring marketing strategies, products, and distribution networks to the preferences and needs of customers in Sub-Saharan Africa can sustain and grow sales in this region.



Thank You.

