

Project Title: E-Commerce Shipping Orders Analysis using Google Looker Studio

Published Report Link: <https://lookerstudio.google.com/s/g9po84YZo00>

Project Objective

The primary goal of this project was to explore and analyze a comprehensive dataset of e-commerce orders to gain insights into order distribution, customer behavior, shipping preferences, and category performance. This data visualization project was built using **Google Looker Studio** to create an interactive dashboard for business decision-making.

Dataset Description

The dataset consists of **9,994 e-commerce orders** involving:

- **793 unique customers**
- Spread across **49 U.S. states**
- Orders categorized by **Region, Segment, Category, Ship Mode, and Product Name**

Main fields analysed:

- Order ID
- Customer Name
- Segment (Consumer, Corporate, Home Office)
- Region (East, West, South, Central)
- Category (Technology, Office Supplies, Furniture)
- Shipping Mode (Standard Class, Second Class, Same Day, First Class)
- Quantity
- City

Steps Taken in the Project

1. **Data Import:**
Imported the raw dataset into **Google Sheets or BigQuery** and then connected it to **Google Looker Studio**.
2. **Data Cleaning:**
Cleaned the dataset to ensure consistency in column names, removed duplicates, and handled missing values.
3. **Dashboard Creation:**
Created interactive visuals using Looker Studio components like:
 - Bar Charts
 - Pie Charts
 - Line Graphs
 - Filters and controls for interactivity
4. **KPI Cards:**
Created metrics such as:
 - Total Orders: 9,994
 - Unique Customers: 793
 - Total States: 49
 - Segment Count: 3
5. **Filters Implemented:**
 - Region filter
 - Segment filter
 - Category filter
 - Ship Mode filter

Visualizations & Insights

1. Orders by Region

- **West region** had the highest number of orders, followed by East, Central, and South.
- Insight: Regional sales strategies may be driving more engagement in the West.

2. Orders by Segment

- **Consumer segment** led the way with ~60.3% of all orders.
- **Corporate and Home Office** followed with 21.2% and 18.5% respectively.
- Insight: B2C (Consumer) market is dominant in this business model.

3. Orders by Category

- **Office Supplies** topped the order count at 32%
- Followed by **Technology (28.5%)** and **Furniture (23.2%)**
- Insight: Operational purchases (e.g., office supplies) are a key revenue stream.

4. Orders by Ship Mode

- **Standard Class** was the most commonly selected shipping option (~51.9%)
- Followed by Second Class, First Class, and Same Day (least used).
- Insight: Customers prioritize cost over speed; premium options are underutilized.

5. Orders by City

- Key cities and their respective order volume were charted, offering location-based insights into demand clusters.

6. Order Trends

- **Line graphs** show order trends over time for both **Product Names** and **Shipping Modes**.
- Can be used to identify peak seasons and top-performing products.

7. Top Customers by Quantity

- Listed top customers and their respective order quantities.
 - Example: Seth Vernon (52 units), Keith Herrera (46 units), etc.
- Insight: High-value customers can be targeted for loyalty programs.

Key Findings

- **West region** drives the highest volume of sales.
- The **Consumer segment** is the most active customer base.
- **Office Supplies** and **Technology** are the top-selling categories.
- Customers largely prefer **Standard shipping**, indicating price-sensitivity.
- A few customers place significantly large quantity orders — potential for B2B growth.

Analysis Summary

The dashboard offers **clear business intelligence capabilities** by allowing stakeholders to:

- Monitor sales across regions and customer segments.
- Optimize inventory based on popular products.

- Tailor marketing efforts based on shipping preferences.
- Identify high-value customers for retention campaigns.
- Recognize underperforming regions or segments for strategic intervention.

Tools Used

- **Google Looker Studio:** For interactive data visualization.
- **Google Sheets/Excel:** For data preparation and cleaning.
- **E-Commerce Shipping Orders Dataset:** Real-world-like business dataset.