The Look

Clothing E-Commerce Analysis

November   2025

Carmina Y. Chu

"Transforming Data into Business Impact."

BIO

Data analyst with over 12 years of experience across various industries, specialising in exploratory data analysis, data cleaning, data storytelling, and building dashboards that turn complex information into meaningful, actionable insights. I am proficient in SQL, BigQuery, Excel, Power BI, Tableau and Looker Studio, with a strong focus on accuracy, usability and business impact.

Skills & Tools

Exploratory Data Analysis	Data Storytelling
Data Modeling	Data Cleaning
Excel	Data Visualisation
SQL	Power BI
Looker Studio	Tableau

+61402388505　　carminayuchu@gmail.com　　Melbourne, VIC　　Linkedin　　Github

Agenda

Business Overview

Context

The Look, an e-commerce clothing site is seeking greater visibility into overall sales performance and product contribution across its range.

- Developed by Looker team
- Data ranges from 2019 - 2025

Challenge

The business requires a report that tracks sales trends over time, highlights top-revenue-generating products, and identifies the customer segments and acquisition sources driving revenue. These insights will inform finance, product, and marketing strategies.

Why it matters

Understanding top-performing products allows the business to smarter business decisions, marketing focus, and better stock prioritisation toward items that deliver the greatest revenue impact.

Business Questions

Finance

What is the revenue trend overtime?

What categories or brands generate the highest and lowest revenue?

Marketing

Which customer segments contribute most to revenue, segmented by gender, age group, and geographical location?
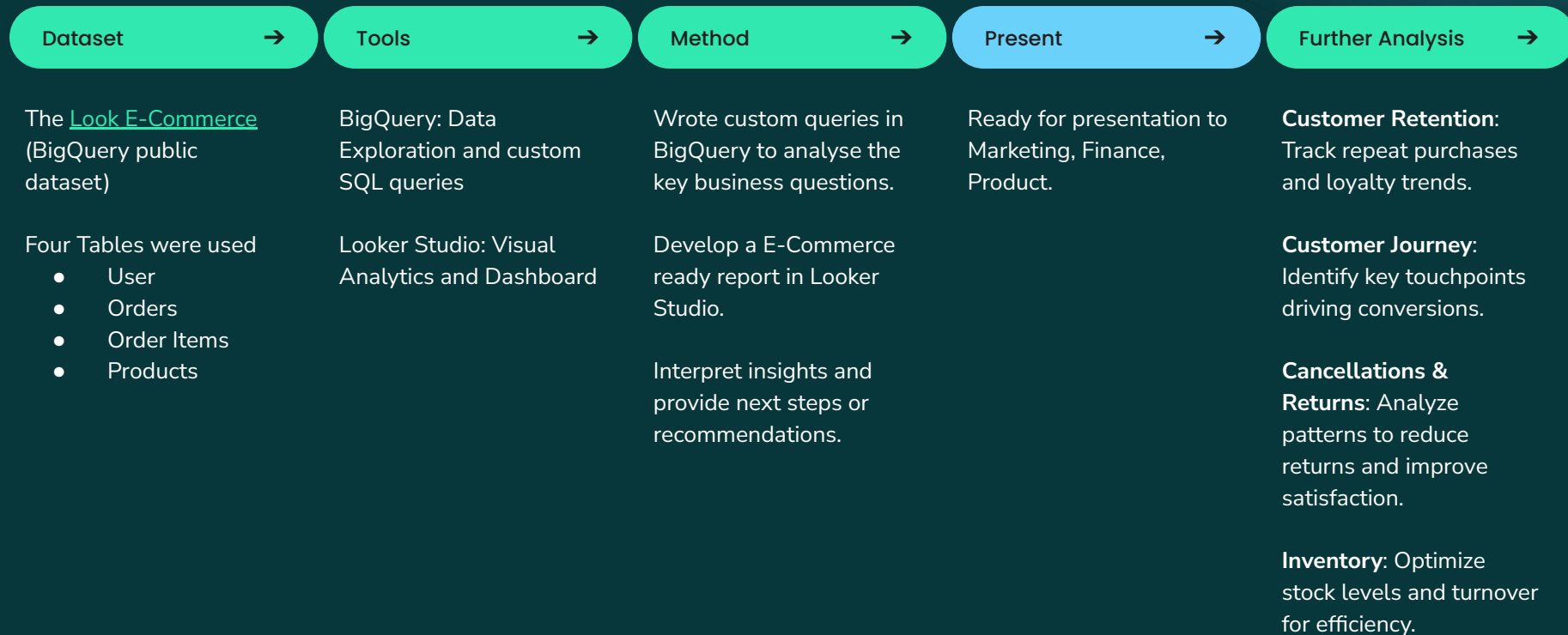
Which traffic sources drives the highest revenue and lowest revenue?

Product

What demographic segments prefer which categories or brand?

Which product categories or brands have the highest conversion but lowest retention?

Data & Approach

Dataset →	Tools →	Method →	Present →	Further Analysis →

Dataset

The Look E-Commerce (BigQuery public dataset)

Four Tables were used
- User
- Orders
- Order Items
- Products

Tools

BigQuery: Data Exploration and custom SQL queries

Looker Studio: Visual Analytics and Dashboard

Method

Wrote custom queries in BigQuery to analyse the key business questions.

Develop a E-Commerce ready report in Looker Studio.

Interpret insights and provide next steps or recommendations.

Present

Ready for presentation to Marketing, Finance, Product.

Further Analysis

Customer Retention: Track repeat purchases and loyalty trends.

Customer Journey: Identify key touchpoints driving conversions.

Cancellations & Returns: Analyze patterns to reduce returns and improve satisfaction.

Inventory: Optimize stock levels and turnover for efficiency.

Significant **revenue spikes** observed in 2025

Oct – Nov 2025: ~180K increase

Sep – Oct 2025: ~123K increase

Feb – Mar 2025: ~109K increase

Largest revenue growth in 2025

- Revenue in 2025 shows strong growth
- November 2025: ~180K increase

Critical

- Monitoring product sales is essential to evaluate e-commerce site performance.

Recommendation:

- Product: Identify top-performing brands and product categories driving the highest revenue.
- Marketing: Analyze customer demographics to identify high-value segments and tailor marketing and inventory strategies accordingly.

Repeat Jan to Feb **revenue dip** in 2022 and 2025

Jan – Feb 2025: ~57K decrease

Jan – Feb 2022: ~33K decrease

Repeat Jan to Feb dip

- Outerwear & Coats were the main drivers during these periods.
- Search traffic also drives these decline
- Geographical: APAC and NA region were primarily concentrated.
- Male Seniors (56 +) were the main customer decline.

Critical

- Might cause the same decline future dates.

Recommendation:

- Product: Conduct a deeper analysis to identify which brands are driving the decline, and categorize them into budget, mid-tier, and premium segments to gain more detailed insights.
- Product: Consider planning assortments and stock levels that match regional seasonality.

Repeat Jan to Feb **revenue dip** in 2022 and 2025

Additional Recommendations

Marketing

Strengthen Search Strategy
- **Improving SEO** for Outerwear & Coats (keywords, metadata, product tagging)
- Adjusting paid search **targeting to reach older male audiences.**
- **Refreshing ad creatives** to highlight benefits relevant to seniors (comfort, durability, functionality)

Product

Since male seniors (56+) were the main contributors to the decline, **review whether current styles, fits, colours, and pricing** align with their preferences. Consider introducing more classic, functional, or premium options if gaps exist.

Clothing sets contributes to only 0.16% overall revenue
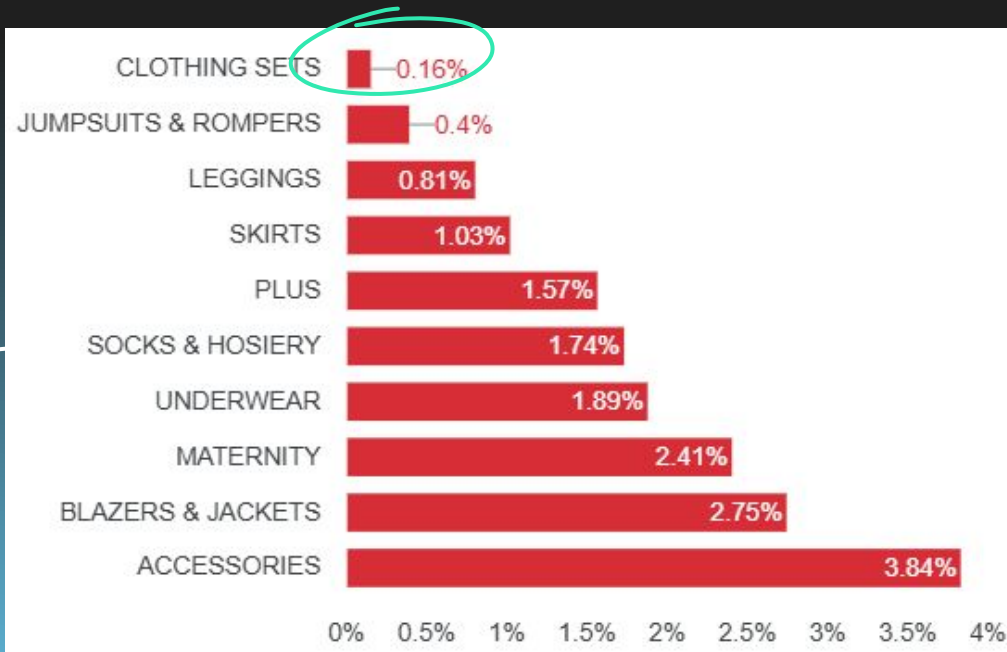
Low contribution in overall revenue

- Minimal improvement over six years, rising only from $128 to $1,336.
- Only contributing to 0.16% from the overall revenue

Critical

- The category made no meaningful impact to the overall business performance, also creating unnecessary operational and inventory cost.
- Limits growth opportunities in more profitable areas.

Recommendation:

- Product: It may be worth discontinuing the Clothing Sets category, given that its revenue showed minimal improvement over six years, rising only from $128 to $1,336.
- Product: If not, revisit the marketing strategy.

Potential Over-Dependence on Search for Revenue Generation (~56–82%)
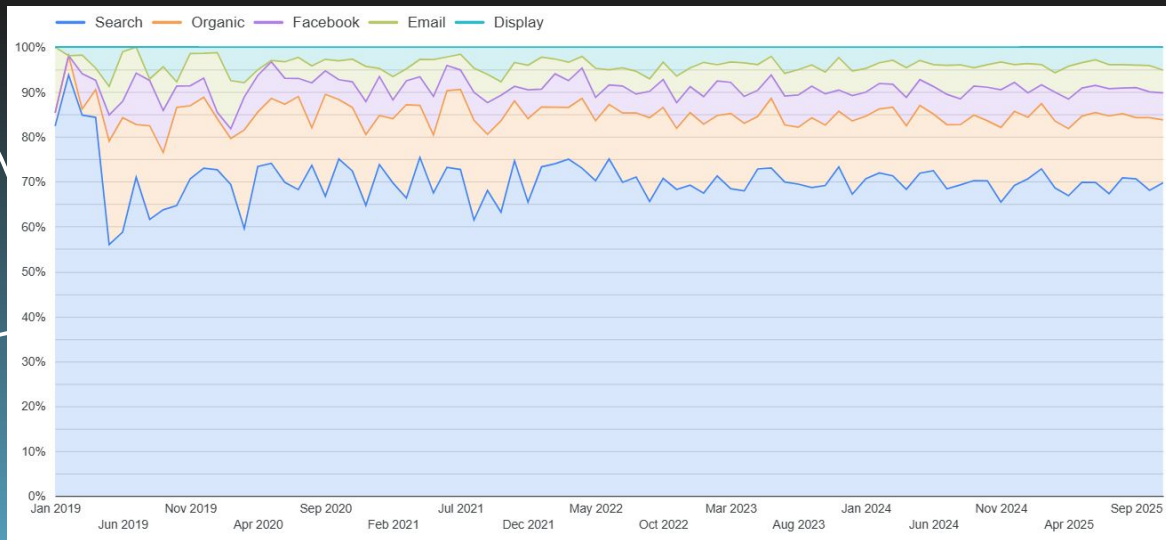
Overdependence on Search
- Overall revenue trends indicate that Search was the dominant driver, contributing approximately ~56-82%.

Critical

- May be heavily over-relying on high-cost acquisition channels.
- Should not exceed 30–35% of revenue to avoid inflated CAC, and the ideal range is around 10–25%
- A dependency this high could indicate an unstable and expensive acquisition mix.

Recommendation:

- Data: Follow up with the data engineering team to confirm the channel mapping, as "Search" currently accounts for approximately 56% to 82% of revenue.
- Marketing: Prioritize investments in SEO and paid search rather than spreading budget evenly.

Potential Over-Dependence on Search for Revenue Generation (~56–82%)

Additional Recommendations

Marketing

- Reduce spend on keywords with high CAC but low LTV. Shift budget toward more cost-efficient channels.
- For other sources, Grow email through list building, segmentation and automated flows. Enhance Facebook retargeting and explore Display or native ads for top-level awareness.

Finance

Revisit the budget of higher-margin or lower CAC channels. Allocate spend towards the other traffic sources.

Conclusion & Next Steps

Overall Insights
- Revenue for the e-commerce site grew steadily, with 2025 marking the peak growth period.
- Highest Revenue Category: Outerwear & Coats, Lowest Revenue Category: Clothing Sets
- Revenue was primarily located in the APAC region, Highest revenue countries were China & United States
- Search channel was the main driver of the revenue.
- No big difference with the gender revenue distribution. (F: 54%, M: 46%)
- Almost half of the revenue belongs to Middle age and Senior group. (~49%)

Next Steps
- Explore for other notable metrics and dimensions to take a deeper dive on the data.
  - Finance: AOV, LTV, Net Profit Margin, Cost
  - Marketing: Campaign ROI, CAC
  - Product: Conversion Rate, Retention Rate (Product & Customer)
  - Dimensions: Brand, Order Status (Cancelled/Returned), Shipped Date, Delivery Date, Returned Date

Assumptions & Limitations

Assumptions
- Since purchase date (created_at) contains future dates, the ingested data for analysis is filter up to the current date.
- Trends observed in the dataset are assumed to reflect normal business patterns, with no major disruptions.
- Revenue is attributed to channels based on the last-click or the reporting model used by the platform, and this is assumed consistent across the period.

Limitations
- Potential Traffic Source Misclassification: Search (Paid) has a fairly large contribution to the revenue.
- Analysis does not account for detailed spend by campaign, which limits insights into cost-efficiency of channels.

Thank you!

Contact me

carminayuchu@gmail.com

Reference & Documentation

Process

Documented the data portfolio project process in notion, covering both business and technical strategies.
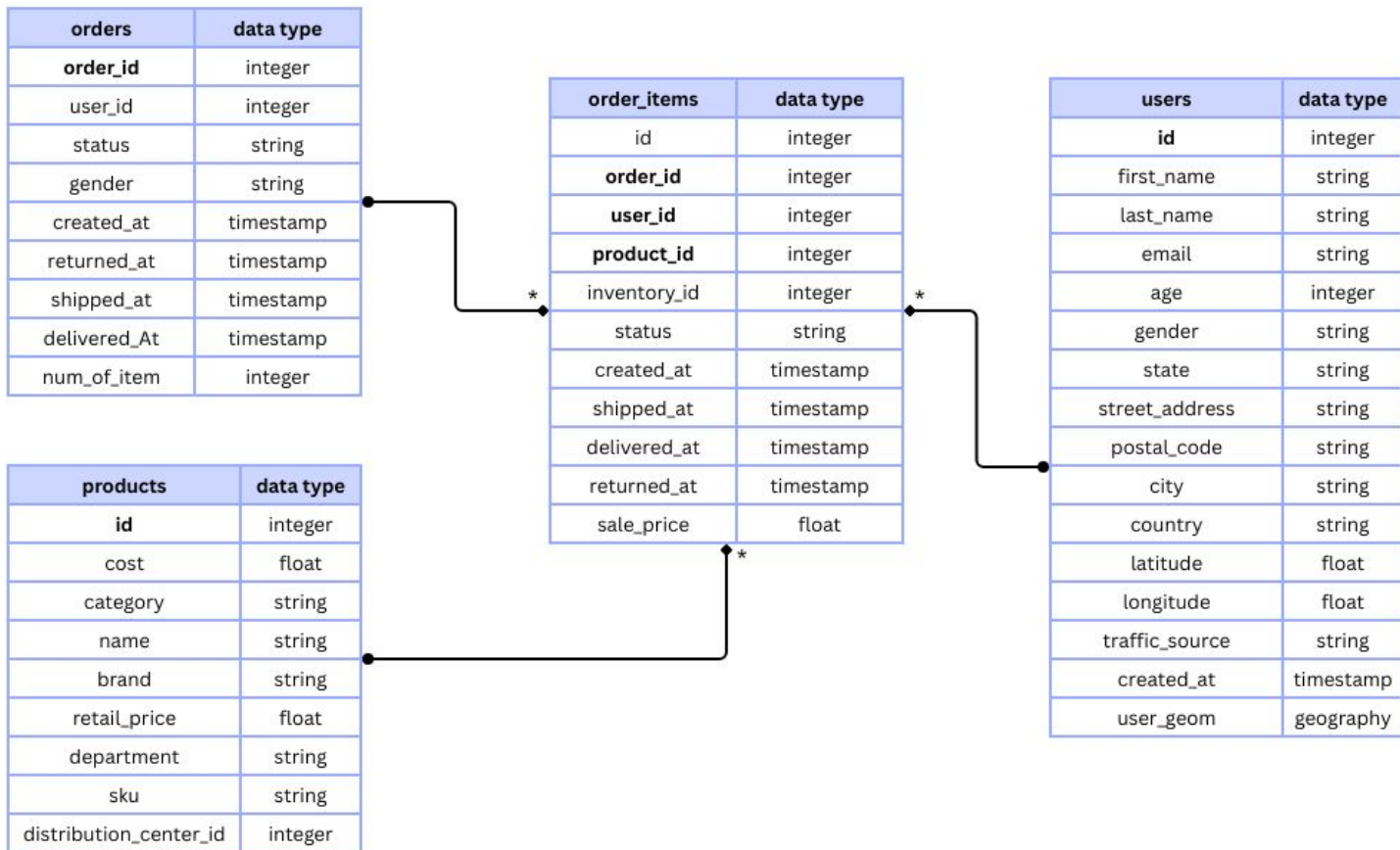
Data Log

Analysed data quality and identified issues, documenting the steps taken to resolve them in Google Sheet. Includes both high-level insights and detailed deep-dive analysis.

Looker Report

Built a dynamic e-commerce report in Looker Studio to drive data visualization and inform recommendations.

orders	data type
order_id	integer
user_id	integer
status	string
gender	string
created_at	timestamp
returned_at	timestamp
shipped_at	timestamp
delivered_At	timestamp
num_of_item	integer

order_items	data type
id	integer
order_id	integer
user_id	integer
product_id	integer
inventory_id	integer
status	string
created_at	timestamp
shipped_at	timestamp
delivered_at	timestamp
returned_at	timestamp
sale_price	float

users	data type
id	integer
first_name	string
last_name	string
email	string
age	integer
gender	string
state	string
street_address	string
postal_code	string
city	string
country	string
latitude	float
longitude	float
traffic_source	string
created_at	timestamp
user_geom	geography

products	data type
id	integer
cost	float
category	string
name	string
brand	string
retail_price	float
department	string
sku	string
distribution_center_id	integer

Looker Studio Report