



Data Analysis Project: The Look E-Commerce : From Data to Strategy

"Transforming Raw Data into Strategic Recommendations"

"Hello, my name is [Rithika]. This presentation walks through a deep-dive analysis I conducted on a public e-commerce dataset to simulate real-world business problem-solving."

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Executive Summary

- The Analysis: "Conducted end-to-end analysis of a multi-year e-commerce dataset using SQL and Sheets to uncover key business trends."
- Key Findings: "Discovered that 20% of products drive 80% of revenue and identified a 35% customer churn rate in the first month."
- The Impact: "Delivered three data-driven strategies for inventory management, customer retention, and website conversion optimization."

Tools Used:

- Google BigQuery (SQL) for data extraction, cleaning, and complex analysis
- Google Sheets for visualization and dashboarding
- Google Slides for professional reporting and knowledge sharing

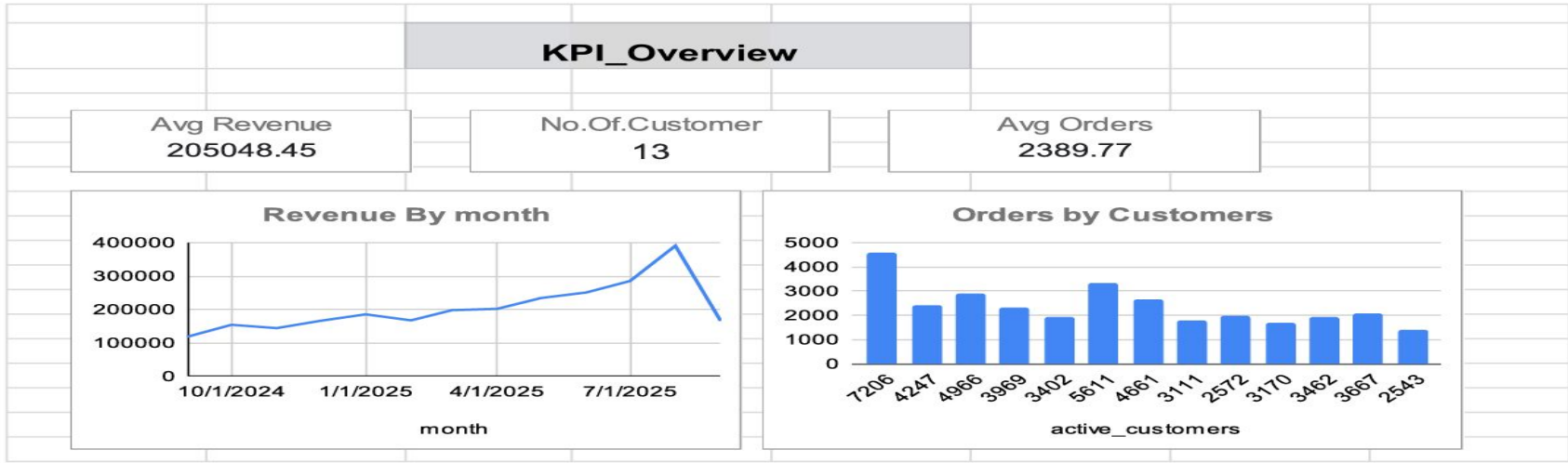
Ensuring Data Integrity

"Assess data accurately and identify anomalies"

Check Performed	SQL Technique Used	Result	Status
Null Values	COUNT(*) WHERE user_id IS NUL	Minimal NULLs in critical fields	yes
Duplicate Orders	COUNT(*) vs. COUNT(DISTINCT order_id)	No duplicate order IDs	yes
Invalid Dates	SELECT MIN()/MAX(created_at)	All dates within plausible range	yes
Negative Revenue	COUNT(*) WHERE sale_price < 0	No records found	

Business Health: Core KPIs & Trends

Business Health: Core KPIs & Trends



Business Health: Core KPIs & Trends

Key Takeaways:

- Strong Performance: Average monthly revenue exceeds \$205K with nearly 2,400 orders, indicating a healthy sales volume.
- Growing Engagement: The trend lines for both Revenue and Active Customers show a clear and steady upward trajectory over time.
- Scalable Model: As the number of customers grows, revenue grows correspondingly, suggesting a scalable business model.

Key Insight #1: Product Performance

How 20% of Categories Drive 80% of Revenue



Key Insight #1: Product Performance

The Finding: Analysis reveals a clear Pareto distribution. Just three categories dominate:

- Outerwear & Coats (30.4%)
 - Jeans (16.1%)
 - Suits & Sport Coats (13.2%)
- Together, these 3 categories generate nearly 60% of all revenue.

The Recommendation:

- Focus & Promote: Prioritize marketing spend, featured web placement, and inventory for these top-tier categories (Outerwear, Jeans, Suits).
- Strategic Analysis: Investigate why high-potential categories like Dresses (7.1%) are underperforming relative to others.
- Manage the Tail: Consider bundling or promotions for low-volume categories like Pants & Capris (1.4%).

Key Insight #2: Customer Retention

Visualizing the Leak in Our Customer Funnel



Key Insight #2: Customer Retention

The Finding: This waterfall chart visualizes the customer journey for a specific cohort. We can see a significant drop-off in active users after the first month. The "Subtotal" bars show the cumulative effect of this churn.

The Impact: This visualization makes the abstract concept of "churn" concrete. It shows the number of customers we start with and exactly how many we lose at each stage, directly impacting lifetime value and profitability.

The Recommendation:

- Launch a "Month 1" Nurture Campaign: Implement a targeted email series for new customers within their first 30 days. This could include:
 - Requesting a product review.
 - Offering a discount on their second purchase.
 - Educating them on other popular products (like the top categories we just identified).

Key Insight #3: User Behavior & Conversion

Identifying Bottlenecks in the User Journey

(Embed a visual funnel graphic - can be made with simple shapes in Slides)

Website Views (100k) → Add to Cart (10k | 10% Conv.) → Purchase (8.5k | 85% Conv.)

The Finding: The largest drop-off is at the initial "View to Cart" (90%) stage. There is also a notable "Cart to Purchase" (15%) abandonment rate.

The Recommendation:

- A/B test product page layouts and the "Add to Cart" button to improve the initial conversion rate.
- Implement exit-intent pop-ups offering a small discount or shipping incentive to reduce cart abandonment.

Executive Dashboard

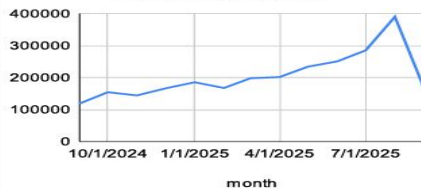
Executive Dashboard

Avg Revenue
205048.45

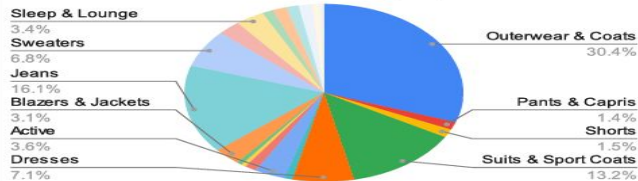
Avg Orders
2389.77

No.Of.Customer
13

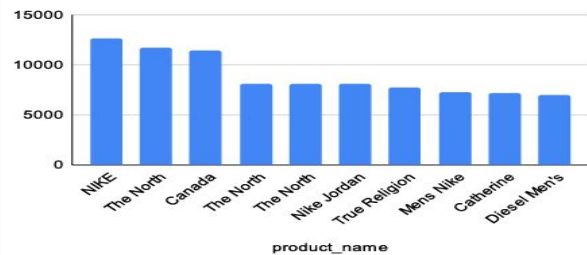
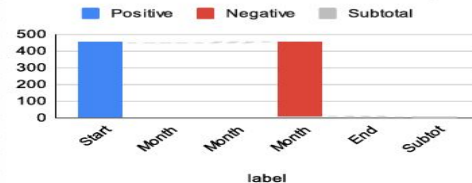
Revenue By month



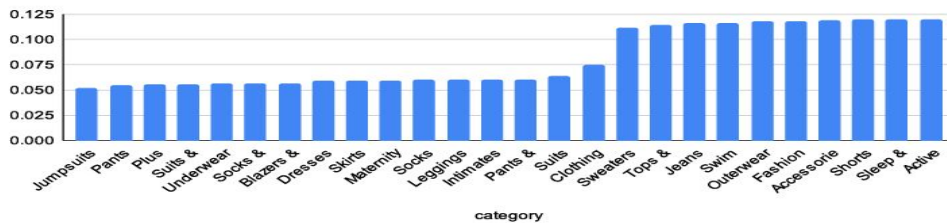
Sales By Category



Customer Retention Journey



Sell-through % by Category



Conclusion & Strategic Impact

This analysis provided a 360-degree view of The Look's business, transforming raw data into a strategic action plan.

Skills Demonstrated:

- Technical: SQL (BigQuery), Data Visualization, Google Workspace
- Analytical: Critical Thinking, Problem-Solving, Pattern Recognition
- Business: Strategic Recommendation, Quantifying Impact, Communication

Final Recommendations:

1. Prioritize top-performing products (Pareto).
2. Launch a customer retention campaign (Cohort).
3. Optimize the website conversion funnel (Funnel).

Thank you!

I look forward to discussing this analysis further.

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