TheLook Sales Performance Analysis

By : Elsha Sovolina

25 July 2025

RevoU FSDA Batch Jun 2025

Business Overview

- TheLook is a fictitious eCommerce clothing site developed by the Looker team. The dataset contains information about customers, products, orders, logistics, web events, and digital marketing campaigns. The contents of this dataset are synthetic and are provided to industry practitioners for the purpose of product discovery, testing, and evaluation.
- The Company aims to optimize sales strategies, improve promotions effectivity, and maximize revenue using data-driven insights.

Disclaimers :
This Analysis is based on public bigquery dataset :
bigquery-public-data.thelook_ecommerce
TheLook is a fictional company created for analytical purposes.
Any Insights or recommendations are based on this dataset and don't reflect real-world data

Dataset Overview and Project Goal

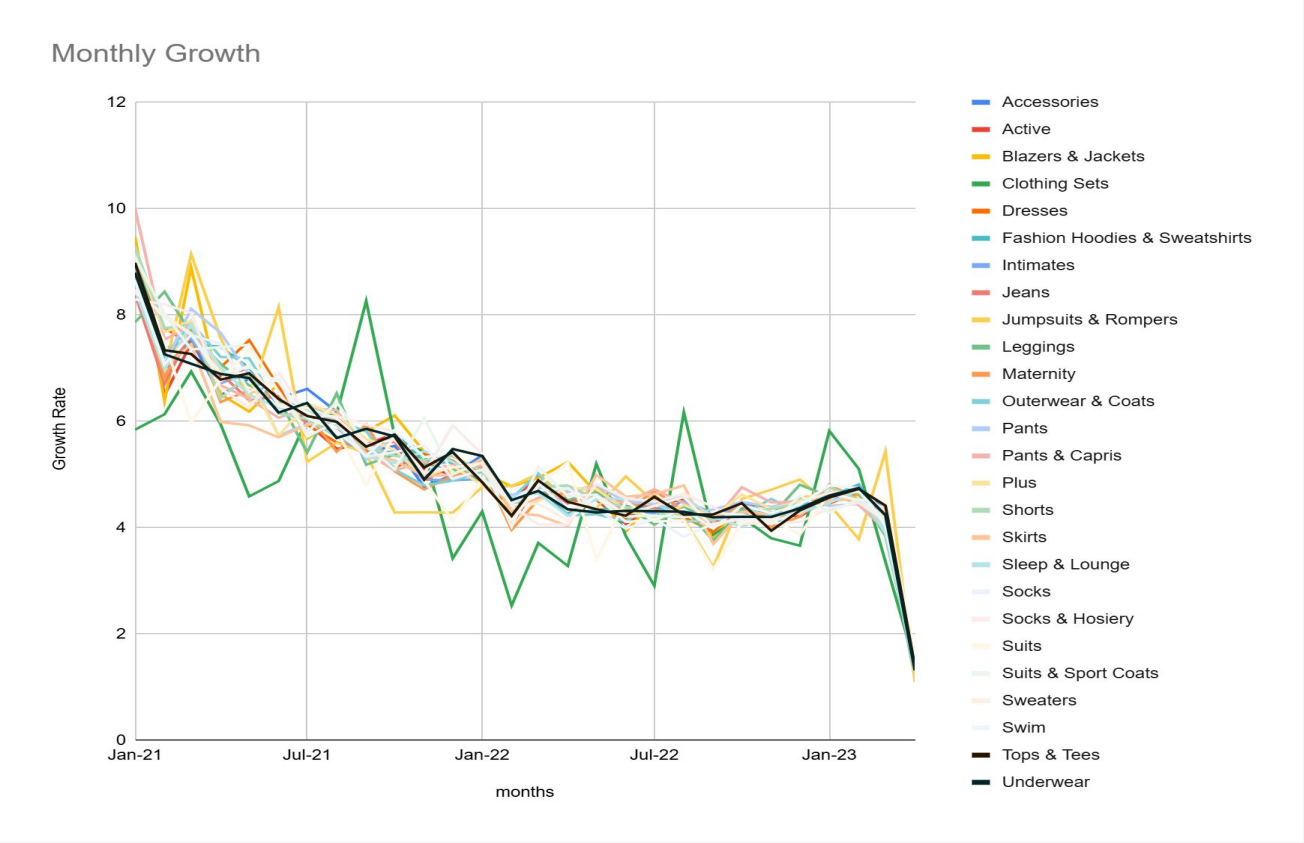
Key Table Used

- inventory_items(Transactional Data Inventory)
- orders(Transactional Data)
- Order_items(Transactional Data per Item)

Project Goal

- Analyze inventory monthly growth
- Analyze retention customers percentage

Inventory Monthly Growth (2023) per Category -Result



Database sql result : Excel Export

Inventory Monthly Growth (2023) per Category -Result

Based on the data, it appears that the monthly growth rates for most product categories are trending downward over time. The growth rates are generally higher in the earlier months (January-February) and tend to decrease in the later months (March-April).

1. Product Category Performance:
   - Clothing Sets have the highest total growth rate (35.14%) across the 16 months, driven by a high growth rate in January (5.84%) and February (6.13%).
   - Jumpsuits & Rompers have the second-highest total growth rate (32.51%), with a significant growth rate in March (9.14%).
2. Consistency:
   - Categories like Socks, Socks & Hosiery, and Underwear have relatively stable growth rates across the 16 months.
   - Categories like Dresses, Fashion Hoodies & Sweatshirts, and Intimates show a decline in growth rate over time.
3. Monthly Trends:
   - January and February tend to have higher growth rates across most product categories.
   - April has the lowest growth rates across most product categories, potentially indicating a seasonal or promotional effect.
4. Product Category Clustering:
   - Categories like Accessories, Active, and Sweaters tend to have similar growth patterns.
   - Categories like Clothing Sets, Jumpsuits & Rompers, and Skirts have more variable growth patterns.
5. Business Recommendation :
   - Double-Check Counts: Perform multiple counts to ensure accuracy and identify any discrepancies.
   - Analyze Sales Trends: Use sales data to forecast demand and adjust inventory levels accordingly.
   - Optimize Product Listings: Ensure product titles, descriptions, and images are accurate and compelling to improve customer engagement and conversion rates

Monthly Retention Cohorts 2022- Result

SUM of retention_rate	purchase_month										
cohort_month	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Jan-22	2.62	0.44		0.44			1.31	0.44		0.44	1.31
Feb-22		1.26	1.26		0.42	0.42	0.42			0.42	
Mar-22			2.55	0.36		0.36	0.73		0.73	0.36	
Apr-22				3.24	0.4	1.62		0.81	0.81	0.4	
May-22					4.65		0.78	0.39	0.78		0.78
Jun-22						1.78	0.36	0.36	0.36	0.36	0.71
Jul-22							1.68	1.01		0.34	1.01
Aug-22								1.63	0.33	0.33	0.33
Sep-22									2.14		1.07
Oct-22										2.91	0.32
Nov-22											4.26

Database sql result : Excel Export

Monthly Retention Cohorts - Result

Key Trends:
- Low Retention Rates: The retention rates are generally low, ranging from 0.32% to 4.65%. This suggests that TheLook eCommerce is struggling to retain customers beyond their initial purchase.
- Downward Trend: There's a noticeable downtrend in retention rates over time, with most cohorts showing a decline in retention rates as the months progress.
- Variation in Cohort Performance: Different cohorts exhibit varying levels of retention, with some performing better than others. For instance, the May '22 cohort has a relatively high retention rate of 4.65% in the first month, while other cohorts have lower retention rates.

Insights :
- Jan '22 Cohort: This cohort shows a retention rate of 2.62% in the first month, which drops significantly to 0.44% in the subsequent months.
- May '22 Cohort: This cohort performs relatively well, with a retention rate of 4.65% in the first month and 0.78% in the later months.

Business Recommendation :
- Improve Customer Engagement: The low retention rates might indicate a lack of effective customer engagement strategies, leading to customers not returning to make repeat purchases.
- Improve Customer Experience: The downward trend in retention rates could be attributed to poor customer experience, such as issues with product quality, shipping, or customer support.

How The Look E-commerce Improve transaction by improving customer experience?

Appendix : Inventory Monthly Growth (2023) per Category - SQL

```sql
with catinvpermonth as--inventory category per month
(select product_category, date_trunc(created_at, month) months, count(id) inv
from `fsda-sql-01.TheLook_Ecommerce.inventory_items` ii
group by 1,2
order by 1,2),
invpermonth as -- inventory per month
(select cim.product_category,
cim.months,
cim.inv,
sum(cim.inv) over (partition by cim.product_category order by cim.months) cumulative
from catinvpermonth cim),
growths as (select product_category,
months,
inv,cumulative,
LAG(cumulative) OVER (PARTITION BY product_category ORDER BY months) last_cumulative,
((cumulative - LAG(cumulative) OVER (PARTITION BY product_category ORDER BY months)) / LAG(cumulative) OVER (PARTITION BY product_category
ORDER BY months)) * 100 AS monthly_growth_percentage
from invpermonth)
select product_category,
months,
cumulative,
last_cumulative,
monthly_growth_percentage
from growths
where extract(year from months) in (2021,2022,2023) -- for a cleaner data
order by product_category, months desc;
```

Appendix : Monthly Retention Cohorts 2022- SQL

```sql
WITH first_purchase AS ( --list first completed purchase of every user in 2022
    SELECT  user_id,
      MIN(DATE_TRUNC(created_at, MONTH)) AS cohort_month
    FROM  `bigquery-public-data.thelook_ecommerce.order_items`
    WHERE  EXTRACT(YEAR FROM created_at) = 2022 AND status = 'Complete'
    GROUP BY  user_id),
  user_cohorts AS (-- list of purchase
    SELECT fp.user_id,
      fp.cohort_month,
      DATE_TRUNC(oi.created_at, MONTH) AS purchase_month
    FROM  `bigquery-public-data.thelook_ecommerce.order_items` oi
    JOIN  first_purchase fp ON oi.user_id = fp.user_id
    WHERE  oi.status = 'Complete' AND
      EXTRACT(YEAR FROM oi.created_at) = 2022),
  cohort_sizes AS (--list of all month and all user
    SELECT cohort_month,
      COUNT(DISTINCT user_id) AS cohort_size
    FROM  user_cohorts
    GROUP BY cohort_month),
  retained_users AS (--list of user and the purchase month
    SELECT uc.cohort_month,
      uc.purchase_month,
      COUNT(DISTINCT uc.user_id) AS retained_size
    FROM  user_cohorts uc
    GROUP BY uc.cohort_month, uc.purchase_month)
```

```sql
SELECT
  ru.cohort_month,
  ru.purchase_month,
  ru.retained_size,
  cs.cohort_size,
  ROUND(ru.retained_size / cs.cohort_size *
100, 2) AS retention_rate
FROM
  retained_users ru
JOIN
  cohort_sizes cs ON ru.cohort_month =
cs.cohort_month
  where ru.cohort_month <> ru.purchase_month
ORDER BY
  ru.cohort_month,
  ru.purchase_month;
```