Apparel Search Interest & Seasonality Analysis

Objective: The objective of this project is to analyze search interest trends and seasonality for selected apparel categories using Google Trends data. Separate keyword-level datasets were collected and cleaned, then integrated into a unified Power BI dashboard to examine temporal patterns, year-over-year growth, and seasonal demand behavior within each category.

Data source: Google Trends
Tool: Power BI

Dashboard Overview

This dashboard analyzes interest trends across key apparel and footwear categories over five years. It is designed to help understand which product categories are growing, how demand changes over time, and how seasonal factors impact purchasing behavior.
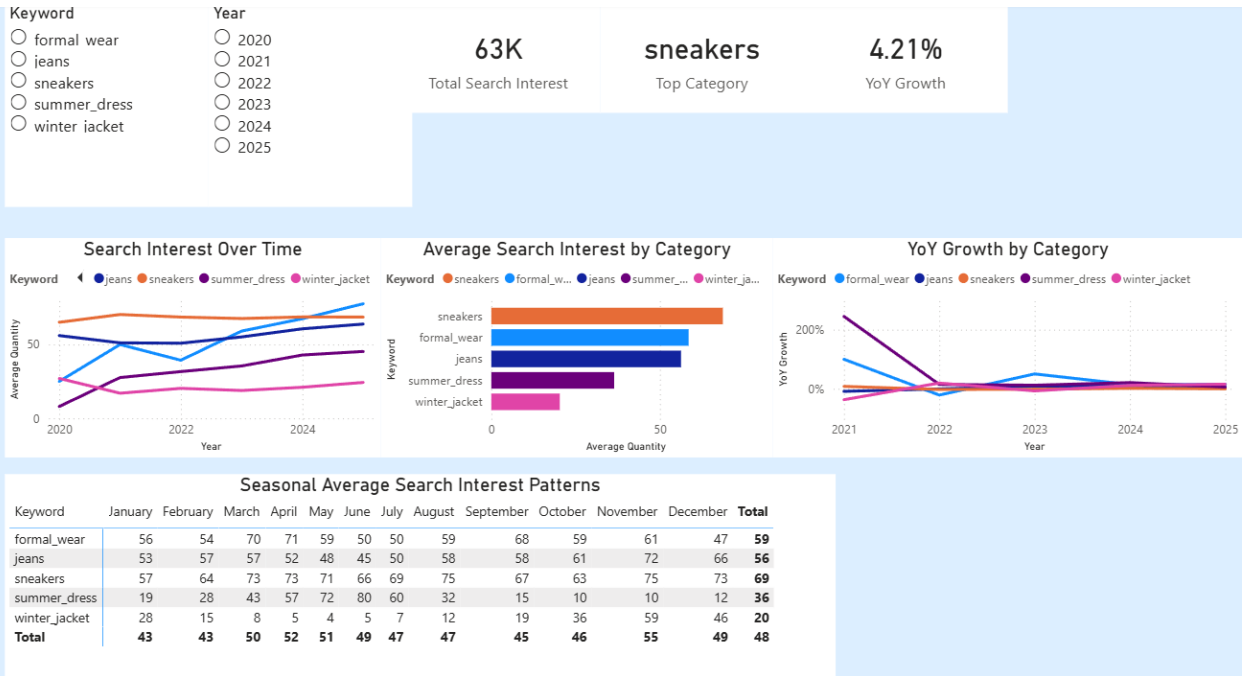The analysis focuses on five major categories:

- Formal wear
- Jeans
- Sneakers
- Summer dresses
- Winter jackets

Note: Trends show indexed interest, not sales.

Key Objectives

The primary objectives of this dashboard are to:

- Track overall demand trends across years
- Identify the top-performing product categories
- Measure year-over-year (YoY) growth to capture changing consumer preferences
- Analyze seasonal demand patterns to support inventory and marketing planning

Keyword
- ○ formal_wear
- ○ jeans
- ○ sneakers
- ○ summer_dress
- ○ winter jacket

Year
- ○ 2020
- ○ 2021
- ○ 2022
- ○ 2023
- ○ 2024
- ○ 2025

63K
Total Search Interest

sneakers
Top Category

4.21%
YoY Growth

Search Interest Over Time
Keyword ◄ ● jeans ● sneakers ● summer_dress ● winter jacket

Average Search Interest by Category
Keyword ● sneakers ● formal_w... ● jeans ● summer_... ● winter_ja...

YoY Growth by Category
Keyword ● formal_wear ● jeans ● sneakers ● summer_dress ● winter jacket

Seasonal Average Search Interest Patterns

Keyword	January	February	March	April	May	June	July	August	September	October	November	December	Total
formal_wear	56	54	70	71	59	50	50	59	68	59	61	47	**59**
jeans	53	57	57	52	48	45	50	58	58	61	72	66	**56**
sneakers	57	64	73	73	71	66	69	75	67	63	75	73	**69**
summer_dress	19	28	43	57	72	80	60	32	15	10	10	12	**36**
winter_jacket	28	15	8	5	4	5	7	12	19	36	59	46	**20**
Total	**43**	**43**	**50**	**52**	**51**	**49**	**47**	**47**	**45**	**46**	**55**	**49**	**48**

Key Visual Components & Insights

Executive Snapshot

The top section provides a quick summary of shopping trends:

- Total Search Interest highlights overall market activity
- Top Category identifies the most in-demand product segment
- YoY Growth reflects changes in consumer interest over time

Interest Over Time

This visualization tracks interest trends from 2020 to 2025 across categories.

Insight:

- Sneakers and jeans show steady growth over time.
- Formal wear demonstrates moderate recovery after earlier declines.
- Seasonal categories such as summer dresses and winter jackets show more fluctuation.

Average Interest by Category

This chart compares average interest levels across product categories.

Insight:

- Sneakers and formal wear maintain a higher average interest compared to other categories.
- Winter jackets show lower average interest overall but exhibit strong seasonal peaks.

Year-over-Year Growth by Category

This chart highlights growth momentum and volatility across years.

Insight:

- Sneakers show positive and relatively stable YoY growth.
- Seasonal categories experience sharper spikes and dips, reflecting fashion cycles and climate influence.

Seasonal Interest Patterns

The seasonal matrix displays average monthly Interest across categories.

Insight:

- Summer dresses peak between April and July.
- Winter jackets peak during October to December.
- Sneakers and jeans maintain more consistent demand throughout the year.

Business Takeaways

- High-demand categories such as sneakers should be prioritized for inventory availability and promotional campaigns.
- Seasonal categories require time-specific inventory planning to avoid overstocking or stockouts.
- YoY growth trends help identify emerging or declining categories, supporting data-driven merchandising decisions.

Conclusion

This dashboard demonstrates how historical demand data can be transformed into actionable insights by combining trend analysis, growth metrics, and seasonality patterns. It supports strategic decision-making for inventory planning, category management, and marketing timing.