

# Lognormal Analytics – Business Analytics Case Study

You're a business analyst for an online retailer tasked with analyzing sales trends to inform strategic decisions. You're given historical sales data for 10 products across three categories (Electronics, Clothing, Home Goods). Your goal is to answer complex analytical questions and present findings to executives, showcasing both numerical rigor and persuasive communication.

## Objectives:

1. **Segment Influence Analysis:** Quantify how different customer segments drive sales volume trends across categories, grouping players as required.
2. **Trend Detection:** Identify and quantify direct or indirect relationships driving sales trends.
3. **Competitor Impact Assessment:** Measure how competitor pricing influences sales volume.
4. **Any other insights you think are important to address.**

## Dataset:

- **Fields:** Product ID, Category, Week, Price, Sales Volume, Competitor Price, Advertising Spend, Customer Reviews, Weather Index, Social Media Mentions, Warehouse Stock Level, Market Share Rank.

## Expectation:

Deliver a concise, visually compelling presentation (e.g., slides, charts) summarizing findings, highlighting key patterns, and addressing data caveats.

**Note:** Use of AI Tools like ChatGPT is allowed but do add a transcript of the chat along with your presentation if used.