CAPSTONE PROJECT:
GLOBAL ELECTRONICS RETAILER ANALYSIS

CAPSTONE PROJECT

Tina Okonkwo

- Microsoft Certified Data Analyst
- Three years experience across several industries.
- Train courses on Power BI, Data Visualization and Storytelling with Data.
- My goal is to help others kickstart their career in data analytics.
- www.twitter.com/rita_tyna
- www.linkedin.com/in/augustina-okonkwo

CASE STUDY: BUILDING A SALES DASHBOARD

Objective:

Create a sales performance dashboard for a global electronics retailer to consolidate and analyze sales, customer, product, and store data. The dashboard will track key performance metrics, uncover sales trends, and provide actionable insights for management to make data-driven decisions.

Company Overview:

Maven Electronics is a global retailer that sells computers, cell phones, TVs, cameras, appliances, and other consumer products through both online and in-store channels. The company operates across multiple regions and aims to improve profitability, monitor store and product performance, and enhance customer satisfaction.

CASE STUDY: BUILDING A SALES DASHBOARD

Business Problem:

Revenue has been on a downward trend since 2020, and management currently lacks a unified view of performance across sales channels, regions, and customer demographics. Without an interactive dashboard, it is difficult to identify top-performing products, regions, and customer segments, or to understand areas of declining performance. Management needs a consolidated data model and an interactive report to explore key sales drivers, monitor revenue and profit trends, and evaluate store and product-level performance.

CASE STUDY: BUILDING A SALES DASHBOARD

Data Model Overview:

The dataset consists of multiple related tables:

- Sales: Contains transactional data including orders, delivery dates, quantities, currency, and links to customers, stores, and products.
- Customers : Provides customer demographics (gender, age, location) to analyze customer behavior and segmentation.
- Products: Includes product details (brand, color, subcategory, category, unit cost, and unit price) for product performance and profitability analysis.
- Stores: Provides store-level details (location, size, and open date) to assess regional and store performance.
- Exchange Rates (Supporting Table): Provides conversion rates by date and currency to ensure consistent reporting in USD.

CASE STUDY: BUILDING A SALES DASHBOARD

1. Overall Performance (KPI Tracking)
   - What is our total revenue, profit, quantity sold, and customer count?
   - Are these KPIs growing or declining compared to targets?

2. Trends Over Time (Monthly Analysis)
   - How have revenue, profit, quantity, and customer count changed month by month since 2020?
   - Are there seasonal patterns or months where performance consistently drops?

3. Year-over-Year (YoY) Comparison
   - How does performance in the current year compare to previous years?
   - What is the YoY growth/decline % for revenue, profit, and customers?
   - Are we recovering or still trending downward?

CASE STUDY: BUILDING A SALES DASHBOARD

4. Product Performance
   - Which products, categories, and subcategories are driving revenue and profit growth?
   - Which ones are underperforming and contributing to the decline?
   - What are the top 10 best-sellers vs. the bottom 10 laggards?
   - Are our profit margins shrinking due to rising costs or discounting?

5. Customer Insights
   - Who are our customers? (gender, age, geography)
   - Are we losing existing customers or failing to attract new ones?
   - Which customer segments contribute the most to revenue and profit?
   - Are younger or older demographics shifting their buying behavior?

CASE STUDY: BUILDING A SALES DASHBOARD

6. Store & Regional Performance

- Which stores, states, and countries are performing well vs. declining?
- Are certain regions driving the overall revenue decline?
- How does store performance vary based on open date (new vs. old stores)?

Expected Deliverables

- Power BI Data Model: Star schema connecting fact and dimension tables.
- Interactive Dashboard: 3-4 pages covering KPIs, trends, product/customer insights, and store performance.
- Final Presentation: Insights and recommendations based on the analysis.
- Report Published to Power BI Service: Interactive, shareable report for management.

Project Steps

- Know the objective
- Understand the dataset
- Data Cleaning
- Data Modelling
- Data Analysis
- Data Visualization

Q & A