

# Business Problem Statement & Project Deliverables

## Business Problem Statement

Organizations rely heavily on accurate, timely sales data to drive strategic decisions related to product strategy, pricing, marketing, and regional expansion. However, raw transactional data alone does not provide clear insight into what is driving revenue growth, profitability, or changes in customer demand. Without structured analysis and reporting, leadership teams may struggle to identify high-performing products, understand seasonal patterns, or evaluate the true impact of discounts and shipping strategies.

The primary business problem addressed in this project is the lack of a centralized, data-driven view of sales performance that connects revenue, profit, products, categories, and time-based trends. Stakeholders need clear answers to questions such as:

- Which products and categories generate the most revenue and profit?
- How are sales trending month over month and year over year?
- Which categories experience peak sales periods?
- How do discounts and shipping modes affect overall revenue?
- Where should the business focus to maximize profitability and growth?

This project transforms raw sales order data into actionable business intelligence by applying a structured analytics workflow. Through Python-based data preparation, SQL-driven business logic, and Power BI dashboards, the project delivers a comprehensive view of sales performance. The goal is to enable decision-makers to move from descriptive reporting to insight-driven strategy, improving forecasting, product prioritization, and revenue optimization.

By building a repeatable and scalable analytics process, this project demonstrates how organizations can improve data quality, standardize reporting, and empower stakeholders with interactive, self-service dashboards. The result is improved visibility into business performance and stronger support for strategic planning and operational decision-making.

## Project Deliverables

This project produces multiple professional-grade deliverables designed for both technical and business stakeholders:

### 1. Cleaned & Prepared Dataset

A validated and standardized version of the raw sales order data, suitable for SQL analysis and business intelligence reporting.

2. **Python EDA & Data Cleaning Notebook**

Jupyter Notebooks documenting data loading, cleaning, validation, and exploratory analysis. These notebooks demonstrate analytical methodology and data quality best practices.

3. **SQL Business Analysis Scripts**

A collection of advanced SQL queries answering key business questions, including revenue analysis, profitability analysis, time-based trends, and category-level performance.

4. **Power BI Interactive Dashboards (Visualization)**

Build an interactive dashboard providing KPIs, trends, and drill-down capabilities for products, categories, and time periods. These dashboards support data-driven decision-making.

5. **Analytical Report (Document)**

A written report summarizing findings, trends, and interpretations, designed for business and stakeholder review.

6. **Executive Presentation (Gamma PPT)**

A professional presentation highlighting key insights, trends, and business recommendations for leadership and non-technical audiences.

Together, these deliverables demonstrate a complete analytics lifecycle from raw data to executive-level insights, and showcase skills aligned with real-world data analyst and business intelligence roles.