

Data Analytics Case Study: SQL Portfolio Project

This case study presents a complete SQL-based analysis of a multi-table sales dataset containing orders, customers, order details, and product information. The goal is to demonstrate data analytics skills across descriptive analytics, customer insights, product insights, time-series trends, and advanced SQL techniques.

1. Basic Metrics

- Total revenue calculated using SUM(SALES).
- Counted unique orders from the orders table.
- Derived average order value by aggregating revenue per order.

2. Customer Insights

- Ranked top revenue-generating customers.
- Summarized revenue by country and territory.
- Identified Large-deals customers contributing more than 50% of their country's revenue using CTEs.

3. Product Insights

- Identified top-performing products by revenue.
- Compared high-revenue but low-quantity products.
- Calculated average product price per product line.

4. Time-Based Analysis

- Generated monthly revenue trends by YEAR_ID and MONTH_ID.
- Counted order statuses such as Shipped and Cancelled.
- Computed cumulative revenue using window functions.

5. Advanced Ranking

- Ranked customers using RANK() and DENSE_RANK().
- Used ROW_NUMBER() to find the top product per product line.
- Identified customers who ordered the same product multiple times.

This case study demonstrates end-to-end SQL capability suitable for junior data analyst roles. It showcases proficiency in joins, aggregations, window functions, CTEs, time-series analytics, customer segmentation, and product-level insights. These queries can be directly included in a portfolio or GitHub repository.