

Sales Performance & Revenue Analytics Project

Built By: Sahil Saiyed

Tools: Advanced Excel | MySQL

Dataset Size: 249 Records

End-to-End Workflow

Dataset Design → Data Cleaning (Excel) → Commission Modeling → CSV Export → SQL Import & Date Transformation → Revenue Aggregation → CSV Export → Dashboard Visualization

1. Dataset Creation & Simulation (Excel)

- Designed a structured 249-record sales dataset including Order_ID, Revenue, Salesman, Date, Segment, Region, and Product.
- Used RANDBETWEEN() to generate controlled revenue values.
- Applied Excel Table functionality for structured row-level calculations.
- Intentionally introduced inconsistencies (duplicate IDs, misspelled regions, Excel serial dates) to simulate raw business data.

2. Data Cleaning & Business Logic (Excel)

- Removed duplicate Order_ID records using Excel duplicate detection.
- Standardized categorical values (Region, Segment).
- Converted Excel serial dates into proper date format.
- Created Commission_Level using nested IF logic based on revenue thresholds.
- Calculated Total_Commission using PRODUCT() to apply commission logic.
- Prepared clean, database-ready dataset for export.

3. CSV Handling & SQL Integration

- Exported cleaned dataset as CSV for structured SQL compatibility.
- Verified column alignment and numeric consistency before import.
- Imported CSV into MySQL and validated table structure.
- Created new DATE column using ALTER TABLE.
- Converted Excel serial dates using DATE_ADD with base '1899-12-30' and CAST.
- Preserved original date column for validation.

4. SQL Revenue Analysis

- Performed revenue aggregation using SUM().
- Counted transactions using COUNT().
- Extracted YEAR() and MONTH() for time-based revenue analysis.
- Applied GROUP BY for segmentation.
- Used ORDER BY and LIMIT for ranking top customers.
- Generated insights: Revenue by Month, Segment, Region, Top Customers, and Orders per Sales Representative.

5. Dashboard Development & Insight Communication

- Exported SQL outputs as CSV and re-imported into Excel.
- Built Monthly Revenue Trend (Line Chart).
- Created Revenue by Segment (Horizontal Bar Chart).
- Developed Revenue by Region (Column Chart).
- Applied clean formatting, grid removal, and structured layout for business readability.

Project Outcome

This project demonstrates structured analytical thinking, advanced Excel formula implementation, cross-platform data transfer (Excel ↔ CSV ↔ SQL), SQL-based aggregation and transformation, and dashboard-driven insight communication. The workflow reflects practical end-to-end data analyst capability.