Case Study

Bank Marketing Campaign Analysis (SQL + Power BI)

Objective:

To analyze the performance of a Portuguese bank's direct marketing campaigns aimed at promoting term deposits. The goal was to identify customer segments and campaign strategies that maximize conversion rates.

Approach:

- Cleaned and prepared the dataset using SQL (handled missing values, standardized categories, and formatted data types).
- Conducted analysis through **10 SQL business questions** exploring demographics, campaign performance, and economic factors.
- Exported query results to **Power BI** for data visualization and storytelling dashboards (3 pages: Executive, Deep Insights, and Campaign Analysis).

Key Insights:

- **Customers aged 30–40** had the highest conversion rate (~16%).
- **University-educated** clients were **1.5× more likely** to subscribe than those with only basic education.
- **Blue-collar and management** jobs produced the most successful subscriptions.
- Clients who succeeded in previous campaigns had a **65% higher chance** of success in the next campaign.
- **Call duration** was a strong success driver — average of 260s for conversions.
- **Best campaign months:** May, August, and November.
- **Optimal day:** Monday and Tuesday.
- **The economic confidence index** had a mild but positive influence on conversion.

Business Recommendations:
1. Focus on 30–40-year-old university-educated clients.
2. Optimize call scripts for ~3–4 minutes (ideal duration).
3. Schedule campaigns in **May–August**, early week (Mon–Tue).
4. Target customers with previous positive outcomes.
5. Allocate more budget to management and blue-collar segments.

Tech Stack:
SQL (MySQL) , Power BI.