

Project Proposal Summary: Apple Retail Sales Analysis

Omar Essam & Mohamed Magdy
May 7, 2025

Team Leader: Omar Essam

Project Description

This project involves an advanced SQL analysis of Apple retail sales data, encompassing over 250K rows. The analysis focuses on store performance, product trends, and warranty claims. By leveraging advanced SQL techniques, the project aims to solve real-world business problems, optimize query performance, and extract actionable insights from large datasets.

Team Members & Key Roles

- **Omar Essam:** Data Analyst (responsible for SQL querying, data analysis, and team leadership).
- **Mohamed Magdy:** Data Analyst (responsible for interpreting insights, business recommendations, and trend analysis).

Main Objectives

- Analyze store performance across different regions using SQL queries.
- Identify best-selling products and trends through data analysis.
- Evaluate warranty claim trends and rejection rates to improve customer satisfaction.
- Optimize SQL query performance for large datasets to ensure efficient data processing.
- Provide actionable business insights through data-driven analysis and visualizations.

Tools & Technologies

- **SQL:** For querying and analyzing the database.
- **Python:** For data cleaning, preprocessing, and advanced analytics (if needed).
- **Tableau/Power BI:** For creating interactive dashboards and visualizations.
- **Git:** For version control and team collaboration.
- **MySQL/PostgreSQL:** As the primary database management system.

Project Timeline (8 Weeks)

- **Weeks 1-2:** Data Exploration & Cleaning.
- **Weeks 3-4:** SQL Query Development & Optimization.
- **Weeks 5-6:** Advanced Data Analysis & Insights Generation.
- **Week 7:** Dashboard Development.
- **Week 8:** Final Documentation & Presentation.

Key Performance Indicators (KPIs)

- **Data Quality & Processing:** Ensure data is clean, structured, and well-documented.
- **Analysis & Insights:** Identify key analytical questions relevant to business needs and provide clear, data-driven insights.
- **Visualization & Reporting:** Develop an interactive and user-friendly dashboard.
- **Final Documentation & Presentation:** Deliver a well-structured final report and actionable recommendations.