Capstone Project Report

# Introduction

This capstone project focuses on sales and inventory data analysis to provide meaningful insights and actionable recommendations. It aims to simulate a real-world scenario where analytical skills are applied to drive data-driven decisions.

# Dataset Overview

The dataset consists of sales transactions including fields like Date, Year, Month, Season, Product, Category, Region, and Salesperson. This rich dataset allows for diverse segmentation and deep analysis.

# Data Cleaning & Preparation

The dataset was cleaned for missing values, duplicate entries, and formatting inconsistencies. Necessary data types were converted, and relevant columns were created (e.g., Month, Season) to support analysis.

# Pivot Table & Chart Analysis

Pivot tables and charts were created to explore monthly and quarterly trends, regional revenue breakdown, and product category contributions.  
- Q3 showed peak performance across most years.  
- LATAM led slightly in total revenue among all regions.  
- Electronics were the top-performing category, followed by Mobiles and Accessories.

# Inventory & Segmentation Insights

Using subtotals, conditional formatting, and a bar chart:  
- Products below reorder points were highlighted.  
- Inventory distribution across categories was visualized.  
- Recommendations were derived for optimizing stock and managing excess.

# Year-over-Year & Seasonal Trends

YoY analysis showed a steady revenue and profit growth trend. Seasonal analysis revealed:  
- Spring and Summer seasons contribute the highest revenue.  
- Fall and Winter show room for promotional improvements.

# Key Recommendations

- Launch promotions in Q2 and Q3 to leverage high sales periods.  
- Monitor and restock low inventory items, especially wearable‘s and accessories.  
- Improve Winter season performance with targeted campaigns.  
- Expand Electronics category while optimizing inventory for slower-moving products.

# Security Measures

- Raw worksheet protected with password: 123  
- Workbook structure protected with password: 1234  
- Password to open the file: 12345  
- Password to modify the file: 123456

# Conclusion

The project offered hands-on experience with data preparation, analysis, and visualization using Excel. Through pivot tables, charts, and advanced Excel tools, the analysis delivers valuable insights to support strategic decision-making.