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## Project Overview

**Key user attributes** : Retailer, Gender Type, Location(Region, State, City), Product Category, Price per Unit, Units Sold, Total Sales, Operating Profit, Operating Margin, Sales Method.

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## Libraries and Data Handling

**Libraries used** : Pandas, Matplotlib, Seaborn, Scikit-learn, Statsmodel.

**Data Loading and preprocessing** : Loading from CSV, data cleaning, handling dates and categorical data.

08 - 11

## Data AnalysisTechnique

**Descriptive statistics** : Mean, median, standard deviation, Minimum and Maximum Values.

**Visualization methods** : Bar charts, pie charts, heatmaps, count and distribution plots, Line plots.

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## Key Findings

**Major Findings**: Regional Performance, Product Category Preferences, Sales Method Effectiveness, Trends Over Time. **Business Impact**: Marketing Strategies, Inventory Management, Sales Channel Optimization, Forecasting and Planning.

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## Advance Analysis

Geographical insights, Temporal trends.



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## Machine Learning

**Logistic Regression Model** : a widely used statistical method for binary classification problems. For our analysis of predicting high sales in the Adidas dataset, logistic regression is a perfect fit because of its interpretability, computing efficiency, robustness, and suitability for binary classification.

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## Visual Insights

Value Counts for Different Category, Proportions for Different Category.

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## Conclusion

Summary of insights derived, implications for future strategic decisions.

## Appendix

**Code Snippets** : Provided Python code used for loading, cleaning, transforming data, and generating visualization.

**Google Colab Link** :

<https://colab.research.google.com/drive/1-XoZiy7Bp0Xf7TTJX2hdHHFSN2hMoNXU?usp=sharing>

**Datasets** : Sample dataset of Adidas Sales Analysis.

**Github Website Link** :

<https://judegajitos.github.io/CSST104-FINAL-EXAM/#i-project-overview>

