**Project 2: Supermart Grocery Sales Analysis & Profit Prediction**

**Title**: Supermart Grocery Sales: Data Analysis Report

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**1. Introduction:**

The objective of this project was to analyze the Supermart grocery sales data from 2015-2018. The goal was to identify key trends in sales, top-performing categories, and valuable regions to provide actionable insights for the business.

**2. Key Findings & Visualizations:**

This section details the main insights discovered from the data.

* **Finding 1:** *'Eggs, Meat & Fish'* is the highest-grossing category.

A graph of sales

AI-generated content may be incorrect.

* + The *'Eggs, Meat & Fish'* category contributes the most to total sales, indicating high demand.
  + Other top categories include Snacks and Food Grains.
* A graph of sales by year

  AI-generated content may be incorrect.**Finding 2:** Sales have shown consistent growth year over year.
  + The largest portion of sales occurred in 2018, followed by 2017.
  + This demonstrates a positive growth trend for the company.
* A graph of a number of blue rectangular objects

  AI-generated content may be incorrect.**Finding 3:** Kanyakumari is the top city for sales.
  + The top 5 cities by sales are Kanyakumari, Vellore, Bodi, Tirunelveli, and Perambalur.
  + These cities represent the most important markets.
* **Finding 4:** Sales and Profit have a moderate positive relationship.

A screenshot of a graph

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* + The heatmap shows a positive correlation between Sales and Profit.
  + There is a slight negative correlation between Discount and Profit, suggesting that higher discounts may reduce profitability.

**3. Recommendations:**

Based on the findings, the following actions are recommended:

* **Focus on Top Categories**: Increase stock and marketing for the 'Eggs, Meat & Fish' and 'Snacks' categories to maximize revenue.
* **Invest in Key Markets**: Develop targeted marketing campaigns for the top 5 cities to further strengthen these key markets.
* **Optimize Discount Strategy**: Review the discount strategy to ensure that promotions are driving sales without significantly hurting profit margins.

**4. Conclusion:**

The analysis of the Supermart sales data reveals a healthy, growing business with clear top-performing categories and regions. By focusing on these strengths and optimizing its discount strategy, the company can further improve its performance.