Group Name: Solo Science Team

Name: Asher Chok

Email: asherchok@outlook.com

Country: United States

Specialization: Data Science

Problem Description

An exploratory data analysis is needed to visualize the nature of the data given in order to give a visually driven analysis recommendation for decision makers to prioritize restocking of certain products and for efficient general inventory management.

EDA Performed on Data

We tried to visualize the data by asking these questions in hopes that it will give a better picture how the data looks like:

- What is the overall sales trend for each product category over time?
- Which product is consistently performing better than others in sales?
- How do different promotions affect sales?
- Are there any correlations between different promotional types and sales for different product categories?
- Which product had the highest sales revenue each week?
- Is there a seasonal pattern in sales for each quarter?

Final Recommendation

Company is recommended to prioritize restocking high to low order for SKU1, SKU6, and then SKU3 during the pandemic. SKU2's restocking priority should be ranked lower than the other three. If pandemic dies down, company should prioritize restocking high to low order for SKU1, SKU3, and then SKU6.

For inventory management, restocking products in proportion to the quarterly demand can help prevent overstocking or understocking of products which would allow decision maker to optimize their inventory management and ensure that they have the appropriate stock numbers to meet customer demand while minimizing waste and associated costs.

Version Control and Source Code Management

GitHub Repository Link: asherchok/retail-forecasting: Data Glacier internship forecasting project repository (github.com)