**Week 2 Assignment**

“Project 200 Team”

Bishesh Raut

Pratik Gautam

Kashish Tiwari

Westcliff University

Professor Regmi

1. Predictive Analytics for Supermarket Sales Forecasting

Author(s): Akshay Kumar, Sunil Kumar, et al. (2020)

Source: International Journal of Data Science

Summary:

In this investigation, Random Forest and XGBoost (Extreme Gradient Boosting) models were used to predict how much a retail chain would sell, by looking at its historical sales transactions only. Factors from outside the organization such as days off, special offers and community events, were found to strongly impact sales. It shows organizations how predictive analytics helps them properly monitor inventory, leading to less overstocking and more prompt restocking.

Relevance:

You can see that, by themselves, sales data can improve decision making in supermarkets, but when used with advanced models, the effects are even more noticeable. This is in line with the main aim of talking about sales performance.

2. Understanding Customer Buying Behavior through POS Data

Author(s): Laura Smith & Mark D. Lee (2019)

Source: Journal of Retail Analytics

Summary:

Data was collected from ten supermarkets’ point-of-sale (POS) systems for a year to study how and what people shop for. The impact of when the shopping took place which day of the week it was and the customers’ age groups or interests on the items purchased was examined. There was a strong link found between participation in customer loyalty programs and constant repeat purchases, together with people’s tendency to just buy certain products while walking a specific aisle.

Relevance:

It guides us to monitor and analyze customer actions with help from real time sales numbers.

3. Influence of Store Layout and Promotions on Customer Behavior

Author(s): Maria Gonzalez, A. Rahman (2018)

Source: Retail Management Review

Summary:

The researchers looked at how layout and shelf position of items, plus in-store promotions, influence purchasing decisions by consumers. It was found using heat maps and shopper tracking technology that putting products together and placing them at the end caps greatly boosted sales. It further seemed that customers’ movement patterns through the store were easy to predict.

Relevance:

It clarifies the link between the design of the store and the enjoyment of promotions and their effect on customer buying in supermarkets.