Data Analytics Capstone Project: Yearly Data of Polish Grocery Store

**Introduction:**

In this project I utilized data sets collected from the multi-branch store computer system of a small grocery store located in a small city in Poland. The data shows: stocking, sales, sales statistics, characteristics of products sold from January 2018 - December 2018.

**Objective:**

Through analysis, next steps for the grocery store in the upcoming year would be determined to improve profit margin by at least 10%. To accomplish this revenue would need to be increased and/or costs would need to be decreased.

**Tools used:**

To start, data was converted from 3 .csv files and cleaned up in Excel by creating values to represent dollar amounts instead of Polish currency (PLN), creating new groups for products to reduce the amount of categories, and identifying/labeling which days were Polish Trade Free Sundays in 2018. Data analysis using descriptive and inferential statistics was conducted within Excel.

Visuals were created using pivot tables (in Excel) and researched information about Polish Trade Free Sundays. Some visuals were also created in Tableau. Visuals focused to represent the dispersion of various categories focused on revenue and costs for a full year, a month, or an individual day.

**Results:**

After completion of analysis it was determined that to increase revenue​ the grocery store would need to plan to be open on all available Trade Days (targeting summer months)​ and improve marketing for summer months (specifically around sporting events) and trade days.

To limit unnecessary costs it was recommended to increase stocking of perishable items during summer months only (specifically the categories of Produce/Dairy and Meat​) and to limit stocking of packages, facial tissue, eggs, cigarettes, and phone items available in store​.