Swire Coca-Cola Innovation Forecast

Business Problem Statement

Swire Coca-Cola, USA is responsible for the production, sale, and distribution of Coca-Cola and various beverages across 13 states in the American West. The company is committed to continuously introducing innovative products into the market. Swire aims to enhance its production planning and management specifically for these products. The primary challenge requires accurately forecasting the demand to ensure mitigate instances of out-of-stocks and overproduction, thereby maximizing profits.

Benefit of Solution

- Forecasting the demand for each innovative product listed so that this guarantees efficient resource utilization.
- Generating the forecast for a designated location within a specified time period.
- Identifying ideal locations and demographics for the specified products. This solution empowers Swire Coca-Cola to make informed and data-driven decisions regarding the launch of new products.

Analytical Approach

This problem can be done in multiple approaches:

1. Identify regular products that closely resemble the specified innovative products and forecast sales by leveraging the sales data of these similar products.
   - Determine the most relevant similar products based on factors such as brand, market category, manufacturer, package type, and/or flavor, matching the specifications of the specified innovative products.
   - Analyze the weekly sales figures of these similar products.
   - Aggregate the sales data of these products to predict the sales of the innovative products.

2. Another method involves segmenting the success of regular products according to demographics and regions. By identifying patterns, and sentiments of the public, we can analyze the weekly sales of these specific items within those regions. This sentiment analysis will forecast for sales of these specified innovative products.

Success Metrics

The success of this project is to minimize losses that corresponds to both out-of-stocks and overproduction of the specified innovative products over a year, compared to the average of previous innovative products. It's important to emphasize that this project is primarily centred on forecasting.

Scope

The primary deliverable for this project will be the sales forecast for the listed innovative products for the current year. This forecast will utilize sales data from similar products of Swire and its competitors, considering both weekly sales and demographic factors. In future, we plan to conduct sentiment analysis to know the potential success of each product. This involves assessing public sentiment towards the products, allowing us to provide insights on the products. Any additional deliverables concerning new innovative products not listed will require discussions with the analyst and inclusion in an updated business problem statement.

Project Details

The project will be undertaken by Team Next Capstone and is scheduled for completion by April 17, 2024. The project milestones are outlined as follows:

1. Business Problem Statement: Defining the business problem statement will be achieved by February 5, 2024.
2. Exploratory Data Analysis and Visualizations – Visualizing the data using exploratory data analysis will be accomplished by February 25, 2024.
3. Modelling Analysis – Modelling the data using the machine learning models will be completed by March 24, 2024.
4. Final presentation – Presenting the final deliverables to the Swire Coca Cola team panel is scheduled for April 11, 2024.
5. GitHub portfolio – Creating and publishing the GitHub portfolio for the project by April 17, 2024.