



Data Glacier Data Scientist Internship

Batch: LISUM23: 30

Week7: Deliverables

Project: Retail Forecasting

Team member's details:

Group Name: Retail_forecasting

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|-----------------|---------------------|-----------------|----------------------------|--|
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| College/Company | NJIT | NJIT | Sumitomo Mitsui Trust Bank | |
| Specialization | Data Science | Data Science | Data Science | |

Problem Description:

This major Australian beverage corporation operates within the beverage industry. Their product distribution spans across multiple supermarket chains, and they actively conduct robust promotional campaigns year-round. The demand for their products is subject to fluctuations driven by factors such as holidays and seasonal trends. They require a weekly item-level forecast for each of their products, categorized into weekly intervals.

Business Understanding:

The seasonality affects the beverage business very much. Although they share marketing and distributing products to many kinds of supermarkets, that is not enough and efficient without seasonality. The company needs to know more precisely the weekly basis of trends. They previously used the company's own software to predict it. However, it was very hard to predict the data and the forecasting was not accurate. To be profitable, it cannot rely on its own software anymore. A new time-series model forecasting will appropriately optimize the distribution of their products depending on the

seasonality and maximize their profit. So, they want to deploy the machine learning model to predict precisely.

Project life cycle along with deadline:

| Project weeks | Deadline | Lifecycle |
|----------------------|-----------------|--|
| Week7 | Aug 19, 2023 | Problem statement, Pre-process |
| Week8 | Aug 26, 2023 | Data process, understanding |
| Week9 | Sep 02, 2023 | Data Cleaning, Merge, Review |
| Week10 | Sep 09, 2023 | EDA, Final recommendation |
| Week11 | Sep 16, 2023 | EDA presentation for business users |
| Week12 | Sep 23, 2023 | Model Selection and Model Building/Dashboard |
| Week13 | Sep 30, 2023 | Final Project Report and Code |