

Week 7 Deliverables

Group Name: Data Forecasting Team

Team Member's Details

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College/Company: Columbia University of General Studies

Specialization: Data Science: Retail Forecasting

Problem Description

The large beverage company in Australia needs to forecast demand for each of their products at the item level, on a weekly basis. Their sales are influenced by various factors including promotions, holidays, and seasonality. The company currently uses an in-house software solution for forecasting, but it often produces unreliable results. They want to explore AI/ML-based forecasting to replace their current system.

Business Understanding

Project Sponsor: Australia Beverage Business

Department: Sales and Operations Planning

Business Objectives:

- Develop an AI/ML-based forecasting model that can accurately predict weekly demand for each product
- Improve forecast accuracy compared to the current in-house solution

- Account for various influencing factors such as promotions, holidays, and seasonality
- Enable better inventory management and production planning
- Optimize promotional strategies based on accurate demand predictions

Target Audience:

- Sales and Operations Planning team
- Inventory Management team
- Production Planning team
- Marketing team (for promotional planning)

Project Lifecycle and Deadline

Proposed Start Date: 10/19/2024

Target Completion Date: 11/30/2024

Project Milestones:

1. (Due 10/19/2024) Data Intake report
2. (Due 10/19/2024) Github Repo link
3. (Due 10/26/2024) Data Understanding
4. (Due 11/02/2024) Data Cleansing and Transformation done on the data
5. (Due 11/09/2024) EDA ipynb file
6. (Due 11/16/2024) EDA presentation and proposed modeling technique
7. (Due 11/23/2024) Model Selection and Model Building/Dashboard
8. (Due 11/30/2024) Final Project Report and Code