Data Science Project Report (Week 7)

Number of team members: 1
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Problem description:
Our client operates within the beverage industry in Australia. The primary challenge is to develop multivariate forecasting models, utilizing machine learning or deep learning techniques, to accurately predict weekly demand for their products. This initiative is driven by the need to analyze historical time series data, incorporating various factors that influence demand, to forecast the quantity of items required by customers each week.

Business understanding:
The overarching business goal of our client is to optimize their supply chain and inventory management and increase sales by achieving precise weekly forecasts of product demand. This precision in forecasting aims to closely align product supply with customer demand, thereby minimizing excess inventory and reducing associated costs. Effective forecasting will facilitate smoother logistics, improve cost efficiency, enhance inventory management, and bolster overall time management within the organization. By addressing these aspects, the client intends to streamline operations, ensuring that products are available to meet customer needs without the burden of overstocking or understocking.

Project lifecycle along with deadline:
Problem and business understanding: Mar 19th
Collect and understand data, identify data cleaning method: Mar 26th
Data cleaning, preparation, feature engineering: Apr 2nd
Exploratory data analysis (EDA): Apr 9th
EDA presentation and propose modeling technique: Apr 16th
Model selection, building, and evaluation; deploy models: Apr 23rd
Project Report and code submission: Apr 30th

Data Intake Report

Name: Data Science : Retail Forecasting-Group Project

Report date: 03/19/2024

Internship Batch: LISUM30

Version: 1.0

Data intake by: Yan-Ping Yu

Data intake reviewer:

Data storage location: https://github.com/YanPing0227/yanping-my-repo

Tabular data details:

Total number of observations	1219
Total number of files	1
Total number of features	12
Base format of the file	.csv
Size of the data	74 KB