Data Science – Retail Forecasting

Group Name	RFuMFM (Retail Forecasting Using Combined ML and Deep Learning Multivariate Forecasting Models)
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Problem Description

The large company who is into beverages business in Australia. They sell their products through various super-markets and also engage into heavy promotions throughout the year. Their demand is also influenced by various factors like holiday, seasonality. They needed forecast of each of products at item level every week in weekly buckets.

Data Cleaning and transformation

The data given was already classified and had no missing values. When checked for any outliers there were some outliers which had the Zscore of >3 and <-3. But as I have no knowledge how the data was gathered, were there any mistakes or anything else I did not change them. With respect to the data column in order to work on time series the date column was set as index of the dataframe and further modified using pandas in day and year columns. This can be beneficial when doing the timeseries calculations and for the models which will be fitted. Moreover, in the attached ipynb notebook I have carried out all the calculations in order to define the problem. I have carried out median impute, mean impute, Zscore for detecting the outliers, and the visualizations.

GitHub Repo link - **https://github.com/TanmayPotbhare/Retail-Forecast-Using-Multivariate-Forecasting-Models/tree/main/Week9**