Bevi Data Science Co-op Forecasting Exercise

Overview:
The goal of this exercise is to understand your approach to building an ML model in Python. The following are the aspects that we will be looking at.
- Data Handling and assumptions
- Feature Engineering
- Model Selection
- Accuracy Checks
- Inferences
- Next Steps

Exercise:
We've given you weekly dispense data for six of our machines before October 2023. You need to use this data to create a forecasted weekly total usage for the weeks in months July to November.

Your forecasts should be based on data till the end of June 2023. The data provided for July 23 to September 23 is only for testing purposes.

Week: Our week starts on Monday and ends on Sunday. The weekend dates you see in the data represent the date a week ended with.

Optional:
The data contains information on the total water and total flavored water dispensed by each machine. If time permits, create a forecast for the flavored water dispense as well.

Provide the following for each machine:
- Forecast for all weeks in July to October. By machine and total.
- Forecast accuracy for weeks in months of July to September from the data provided. By machine and total.
- Insights, inferences, assumptions, and next steps.

Notes:
We don't need you to build a presentation. You can use a python notebook to walk us through your model.

Try **not to spend more than 2-3 hours** on the development. If you have more ideas or techniques you want to test out, please list them in next steps.