Data Science Assignment

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Context

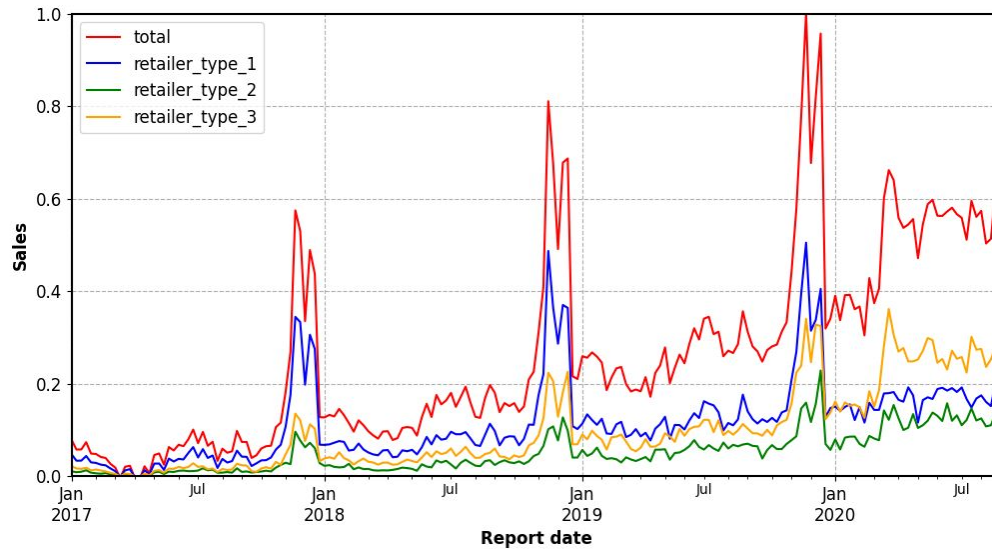> **Data Insight**

Characteristics of the data

> **Forecast**

Upcoming 12 weeks (not included in the dataset) for all 4 levels.

> **Learning from Machines**

Extra knowledge said by the machine learning forecast model

> The dataset contains **weekly data** from **January 2017 to August 2020**

> The dataset contains **4 levels**, total and three `retailer type` levels

> The `retailer_type` levels as **subsets of the total sales**
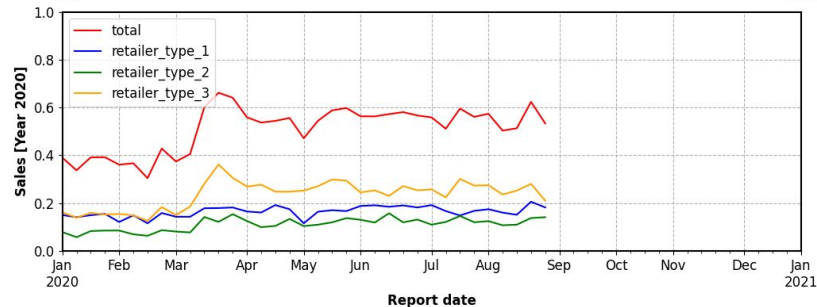
Sales Data
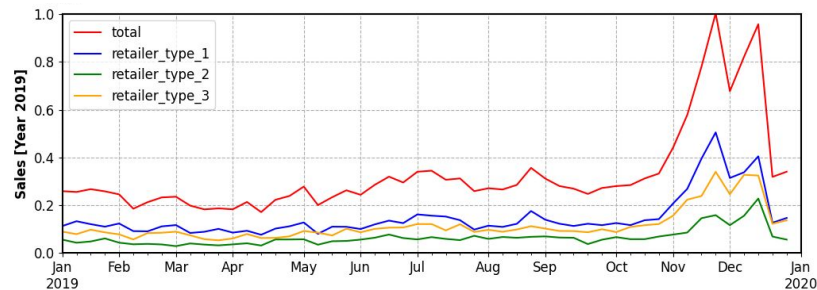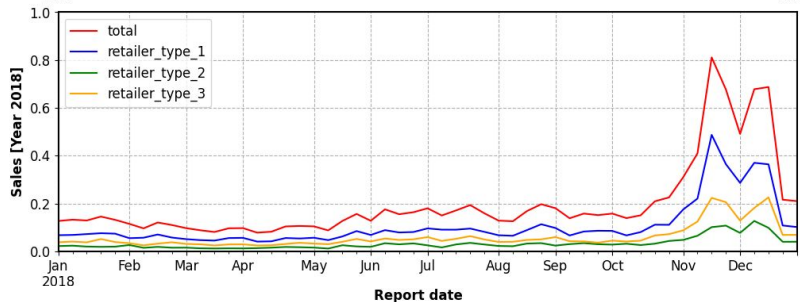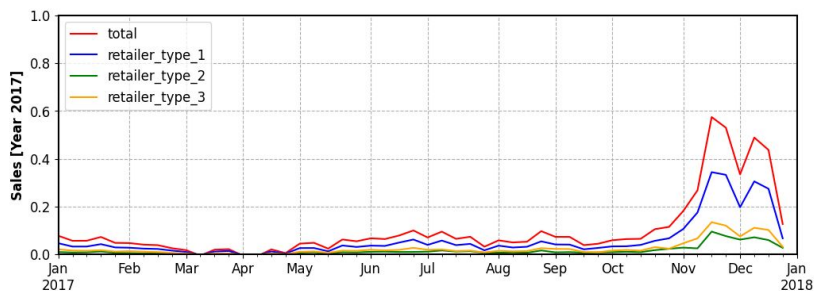
Data Insight

inter-annual variation

> Increasing year by year

> Peak seasons during November to December

> Pattern changed in Year 2020
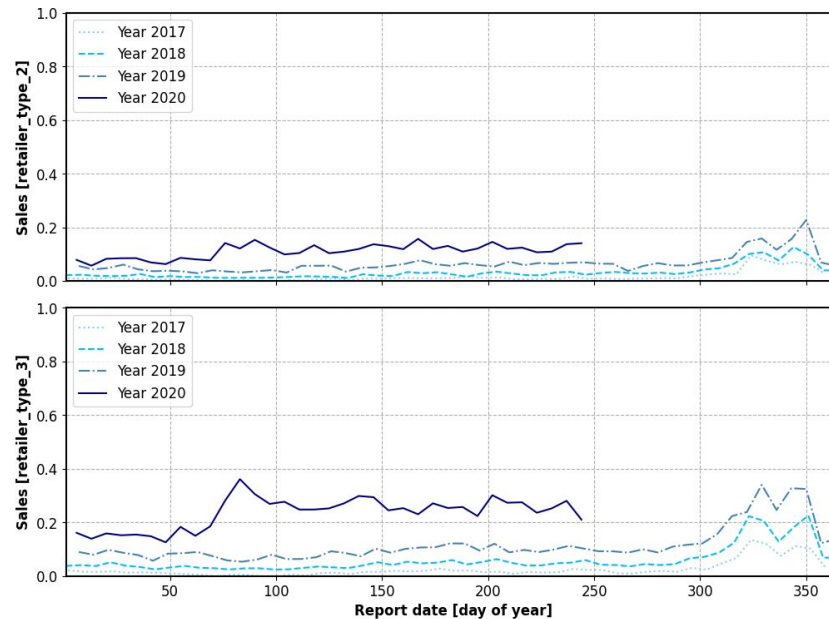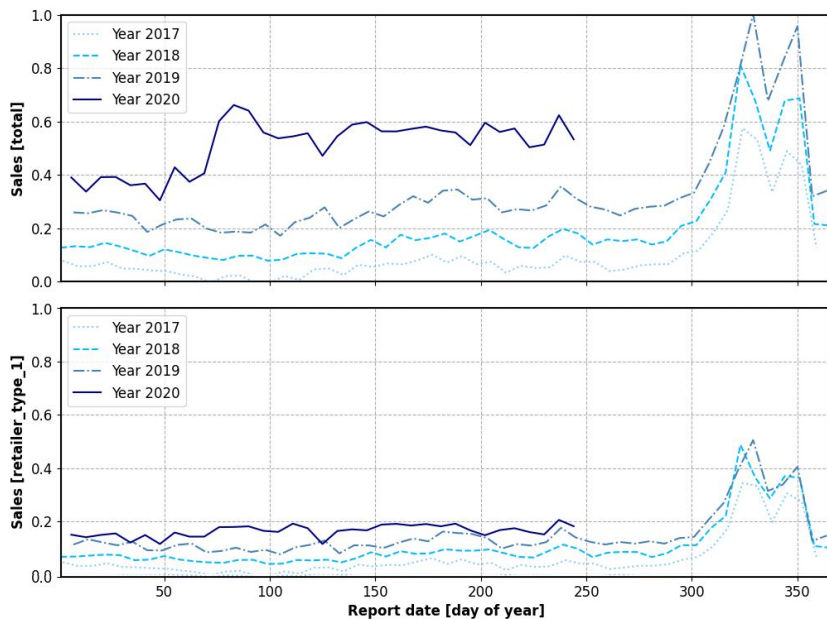
Data Insight

intra-annual variation

> Retailer Type 1 dominated sales prior to 2020

> Retailer Type 3 experienced a surge in sales during 2020

> Retailer Type 2 exhibits a consistent and stable sales pattern

Data Insight

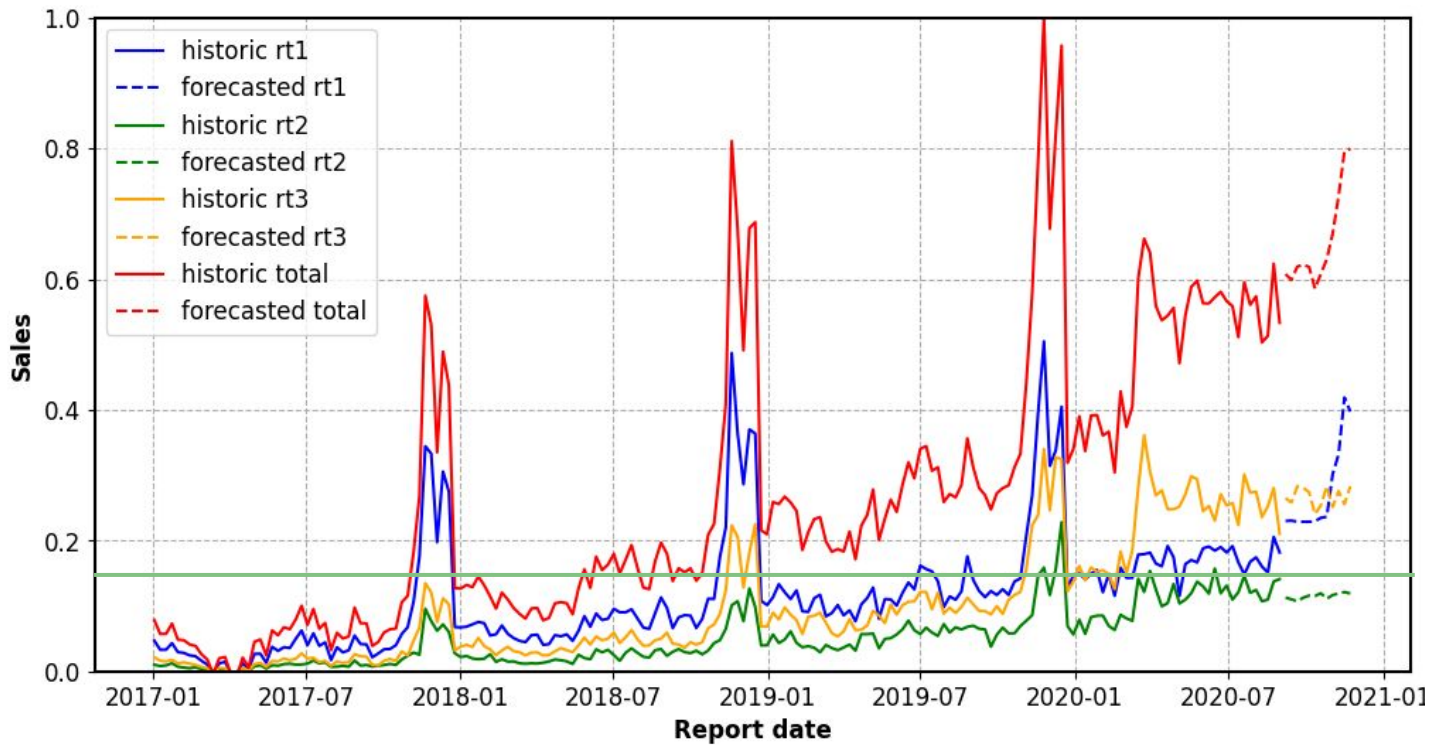> Dataset 1: Brent Crude Oil Futures Contract Price

> Dataset 2: COVID-19 Stringency Index

The stringency index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 1 (1 = strictest).
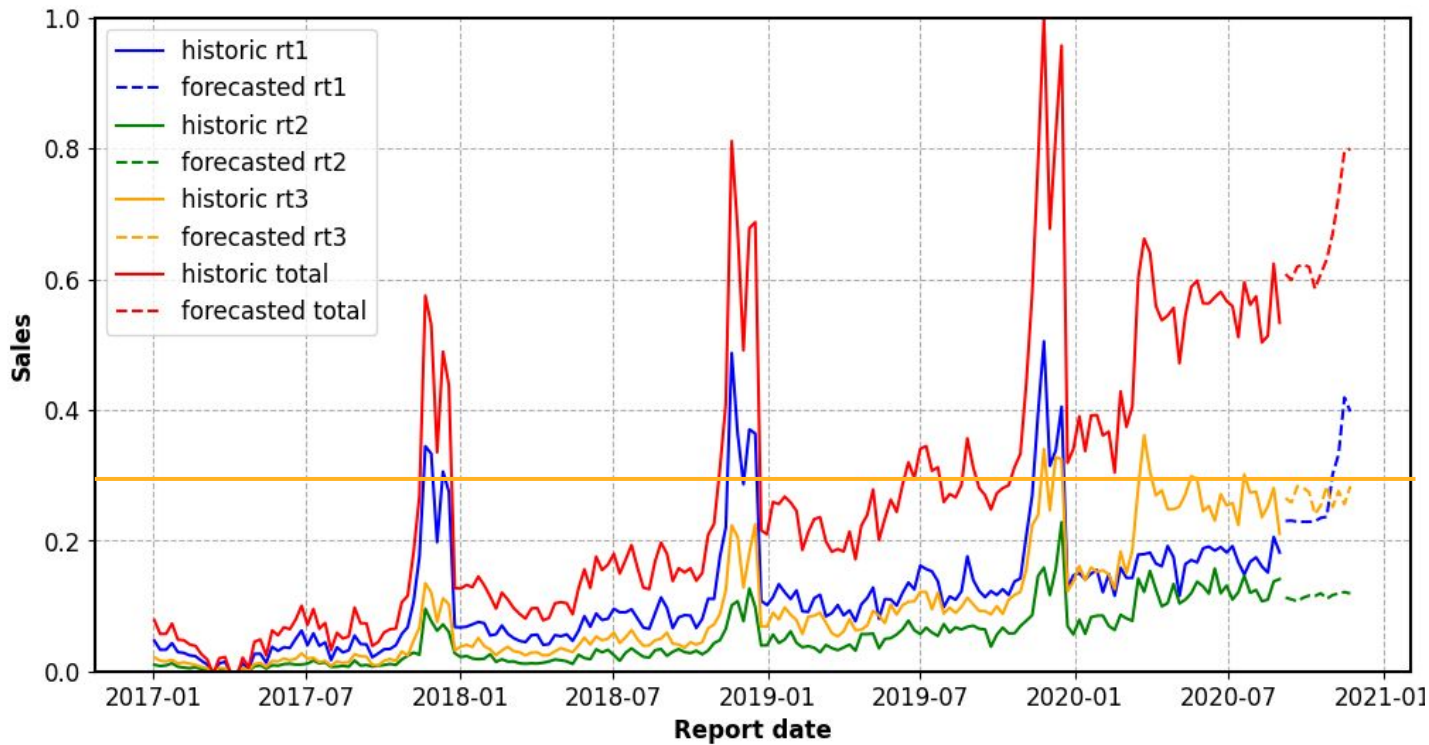
external dataset
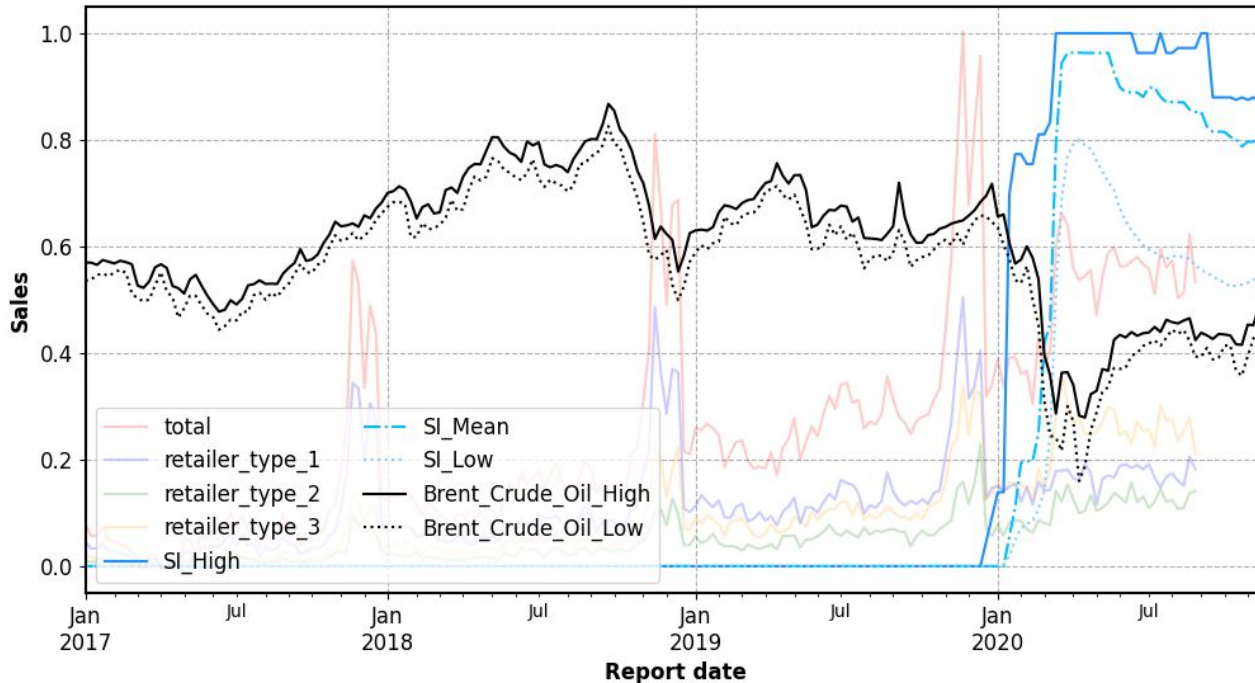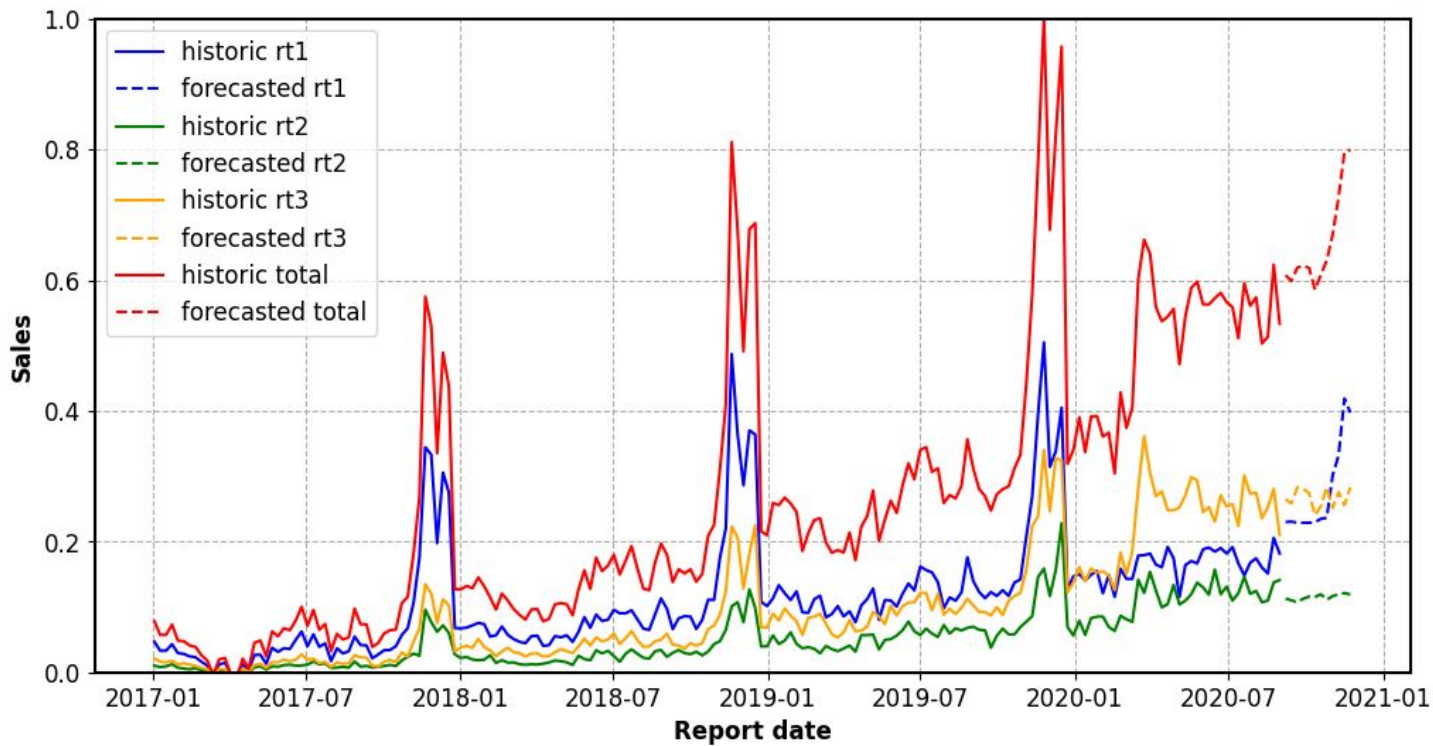
Forecast

Attention: Sales of Retailer Type 2 are already quite high compared to its historical records.

Forecast

Sales

historic rt1
forecasted rt1
historic rt2
forecasted rt2
historic rt3
forecasted rt3
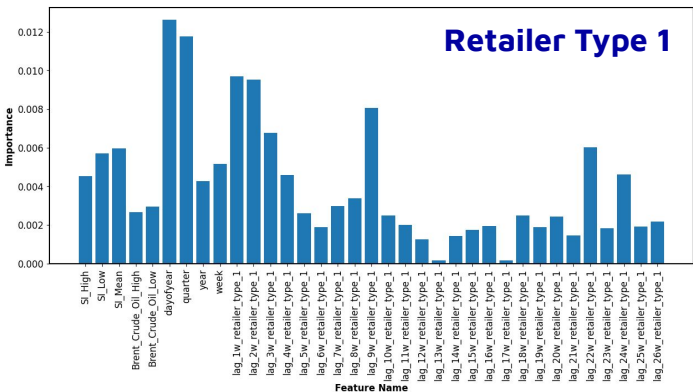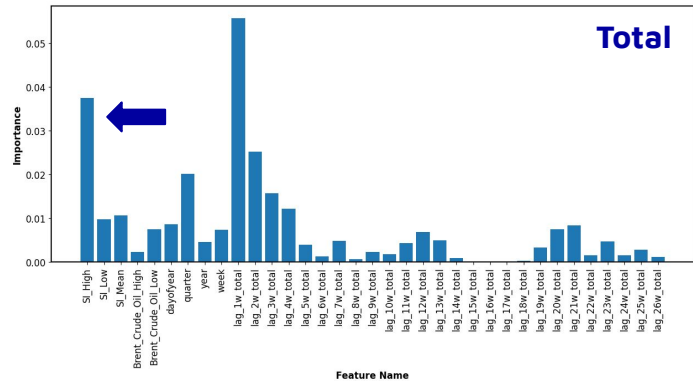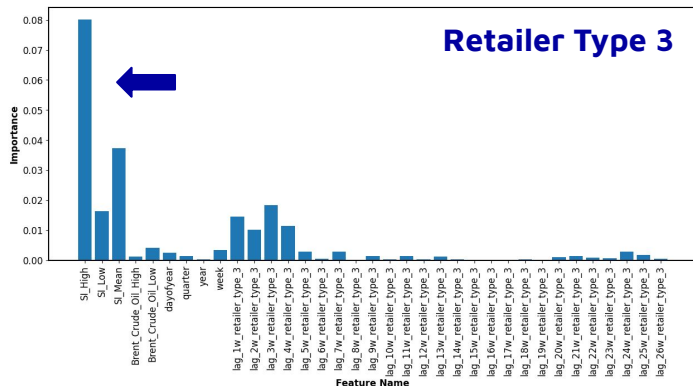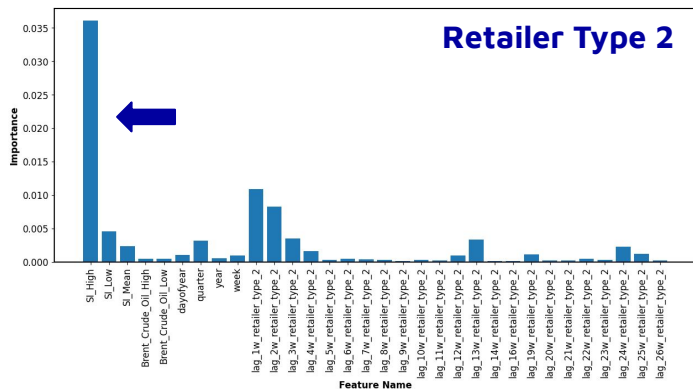historic total
forecasted total

Report date

Attention: Sales of Retailer Type 3 are already quite high compared to its historical records.

Forecast

Learning from Machines

COVID-19 Stringency Index is influencing the sales, especially for retailer type 2 and retailer type 3

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Questions?

Thanks for your attention.

Additional questions can go to:
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