

The background features a complex network of thin grey lines connecting various points, forming a web-like structure. Scattered throughout are numerous triangles of different sizes and orientations, some with solid black dots at their vertices. The overall aesthetic is modern and technical.

Alfinity: EBUY TRACK

NTU C FairPrice

**DATA CLEANING &
EXPLORATORY ANALYSIS**

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OUR APPROACH

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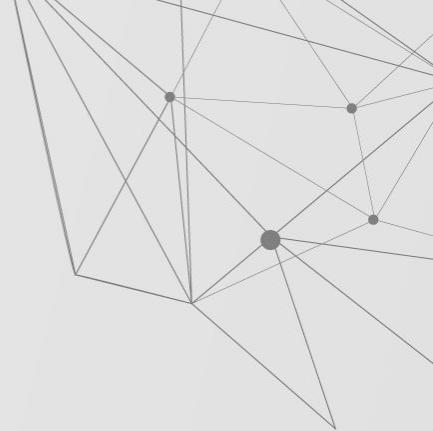
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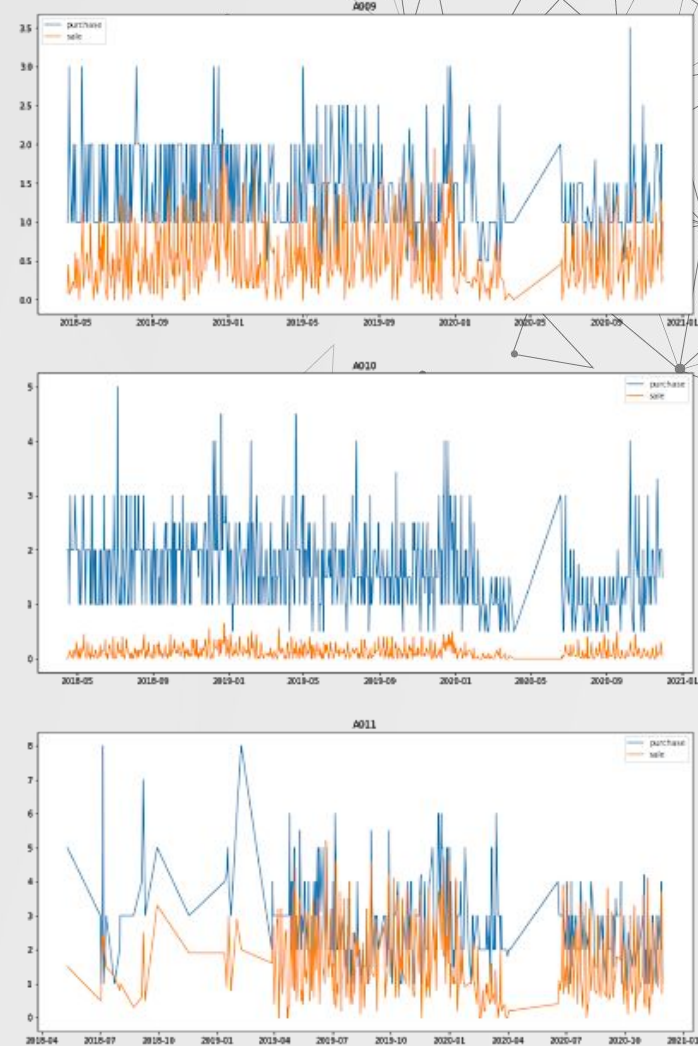
PROBLEM:

Prediction of Order Quantities to be Purchased by Outlets



DATA CLEANING & EXPLORATORY DATA ANALYSIS

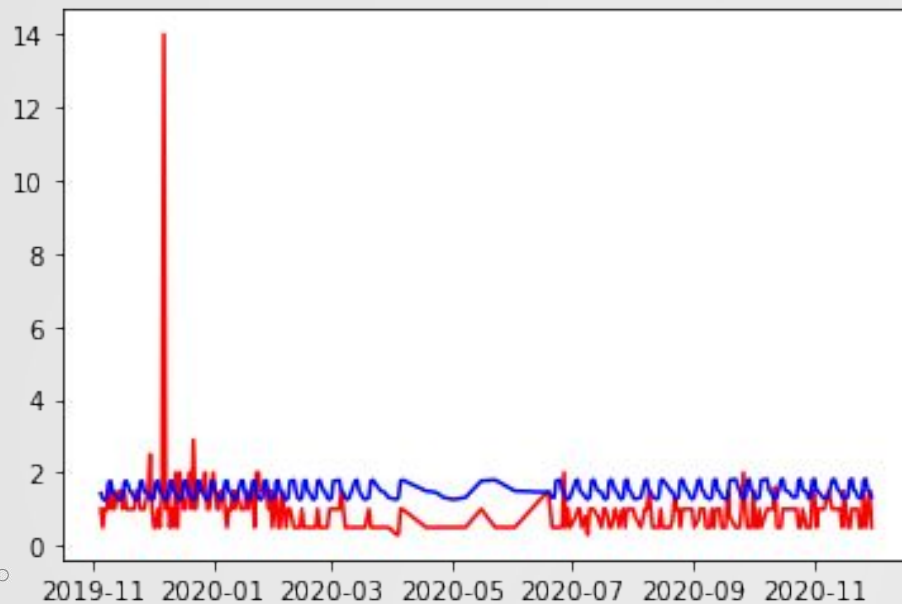
- Consolidated Sales data into **simplified datasets** to find amount of ingredients needed
 - Data visualisation of **Sales** versus **Purchase Amounts**
- **Clear difference** between Sales and Purchases suggests unrepresented factors



OUR APPROACH

- Past **Order Placed** data for train and test sets to factor in unrepresented variables
- **Facebook's Prophet** Time Series Forecasting Model
 - Open source library published by Facebook
 - Additive model that factors in non-linear trends (seasonality and holidays)

ACCURACY OF MODEL



r_square score: -0.4116070777091989

OTHER FACTORS TO IMPROVE CORRELATION

- **Time lag** between purchase and receipt of products
- **Food loss** to other sources
 - Employee consumption
 - Food expiry
 - Transport/Preparation processes
- **Offers and Giveaways**
- **Left Over Inventory**