

Case Study: Menu Analysis - Forecast and Actual Recipe Orders

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For Gousto Interview
7th July 2022**



Objectives

- To identify high level trends
- To identify KPIs for forecasting
- To identify improvement for improve forecasting accuracy

Methodology

Data Processing

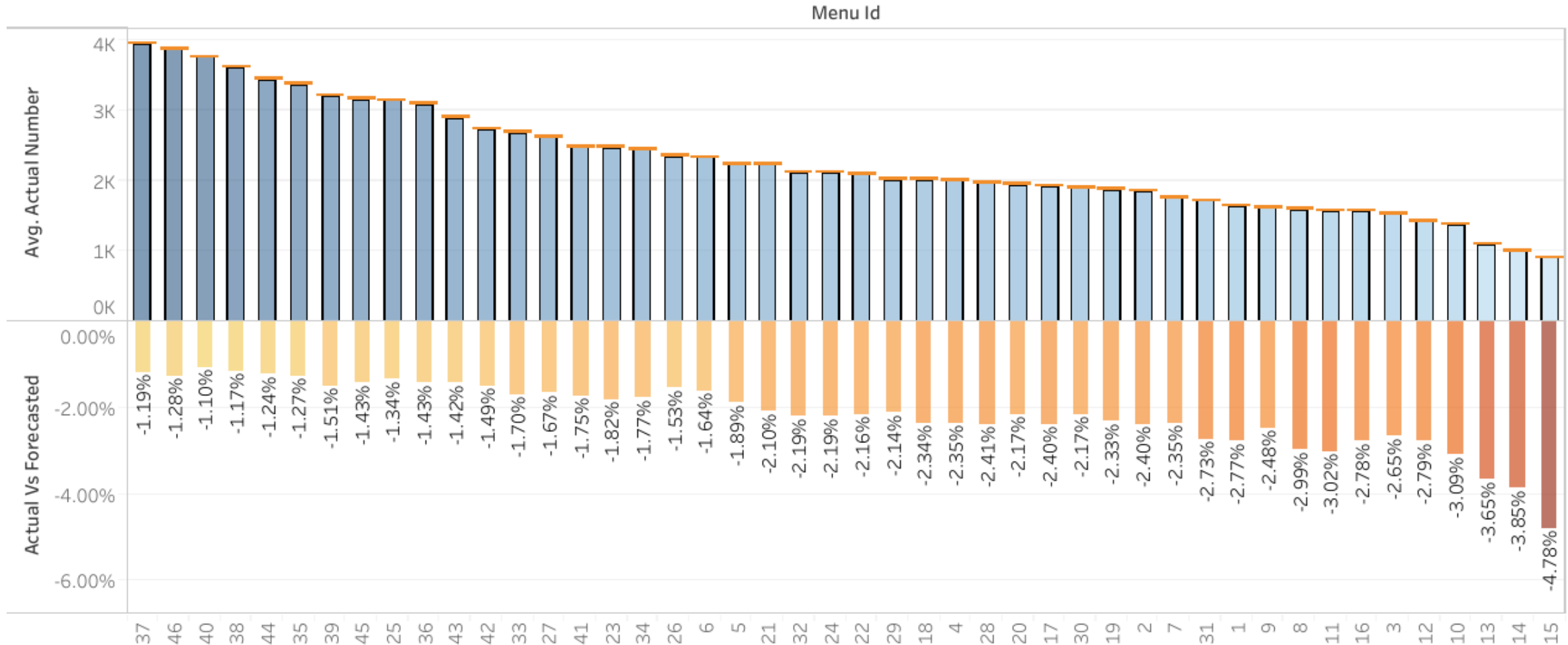
- PostgreSQL database

Analysis & Visualization

- Tableau and Python packages (Pandas, Matplotlib, Seaborn)
- Jupyter Notebook

Forecasted vs Actual Recipe Orders across Menu

Actual vs Forecasted Orders by Menu

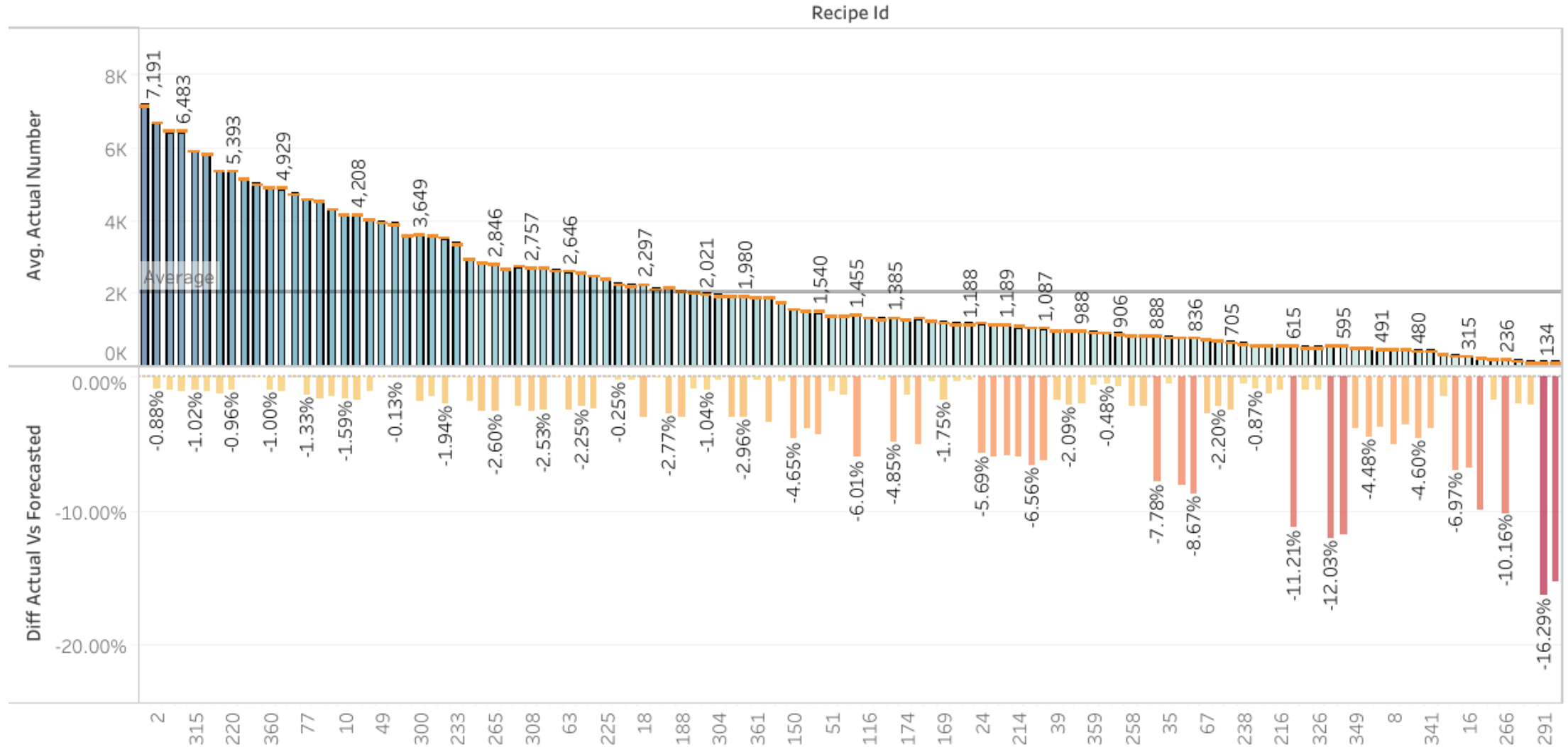


Visualization created using Tableau

Sources: <https://public.tableau.com/app/profile/nurulsaidi/viz/PartAnalysisMenu/ActualOrdersvsForecast#1>

Forecast vs Actual Recipe Orders across Recipe

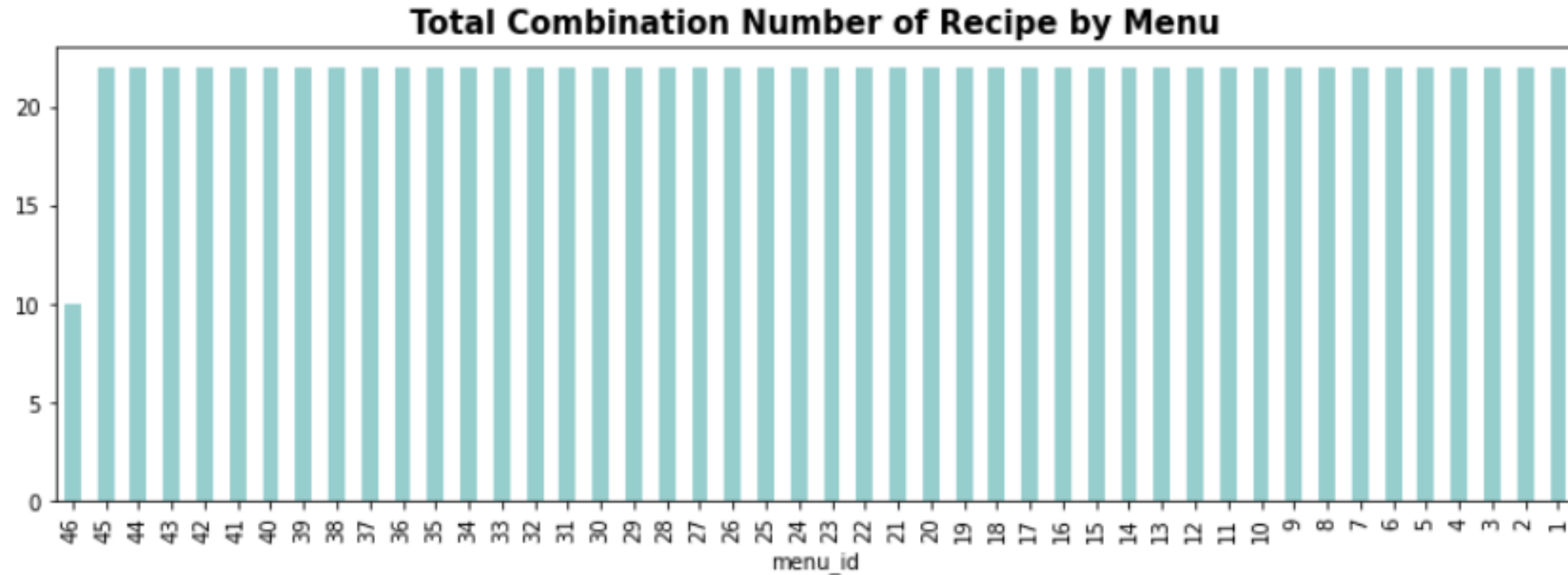
Actual vs Forecasted Orders by Recipe



Visualization created using Tableau

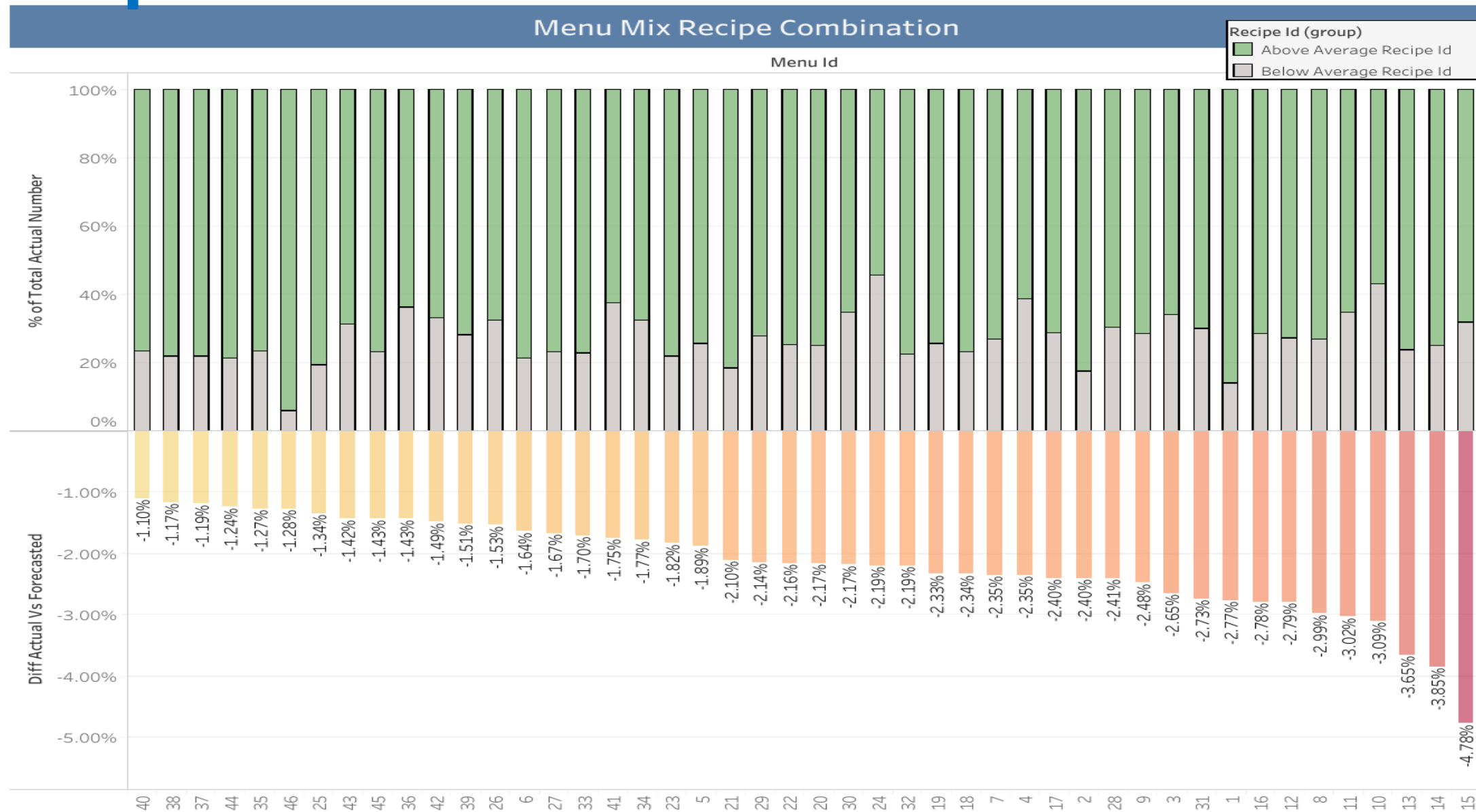
Sources: <https://public.tableau.com/app/profile/nurulsaidi/viz/PartAnalysisMenu/ActualOrdersvsForecast#1>

Total Combination Number of Recipe across Menu



we have identify only one outlier where menu id : 46 consists less than half number of recipe in the combination compared to the rest of the menu available.

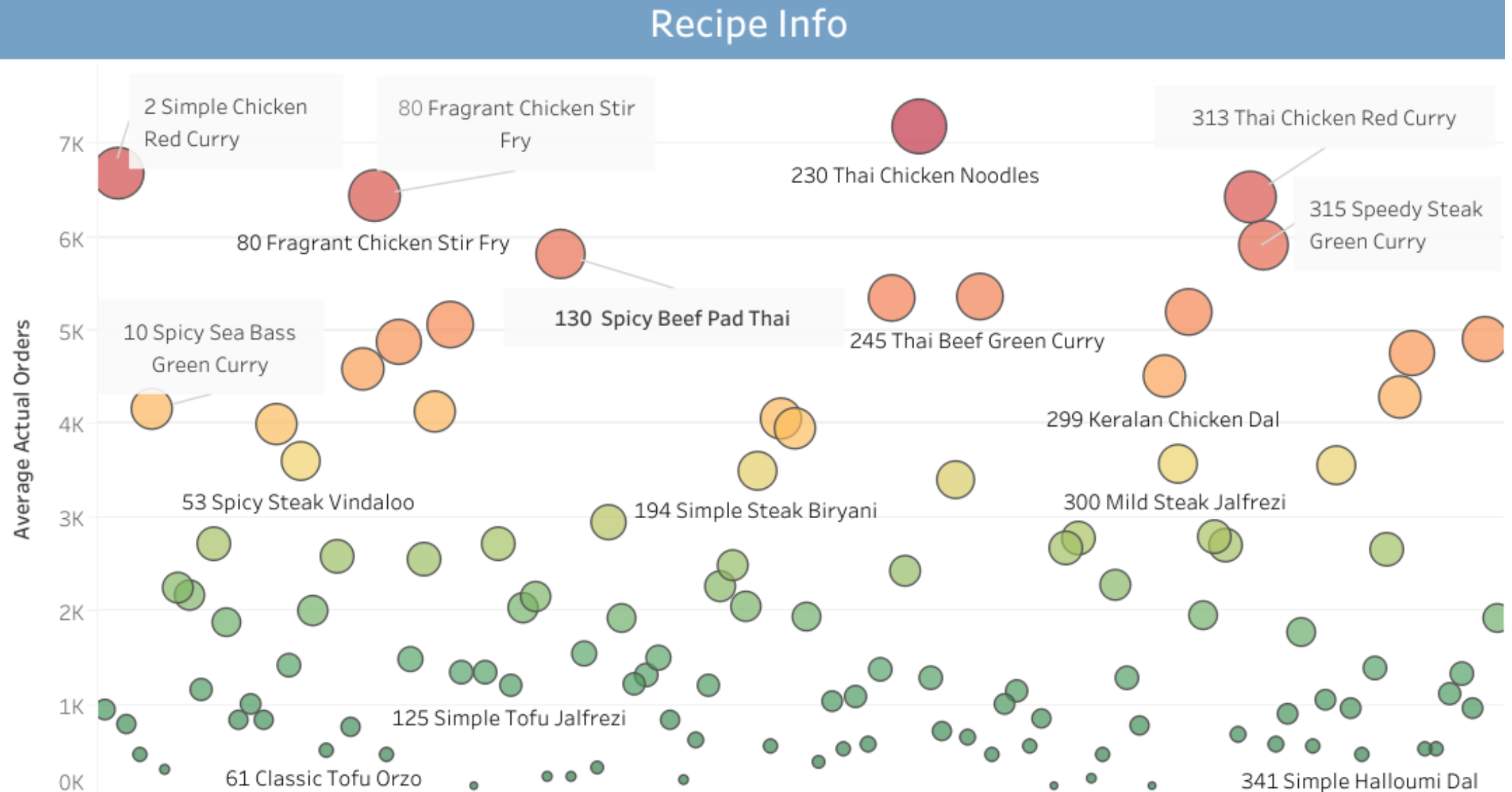
Recipe Mix Combination across Menu



Visualization created using Tableau

Sources: <https://public.tableau.com/app/profile/nurulsaidi/viz/PartAnalysisMenu/ActualOrdersVsForecast#1>

Recipe Actual Order Performance with Info

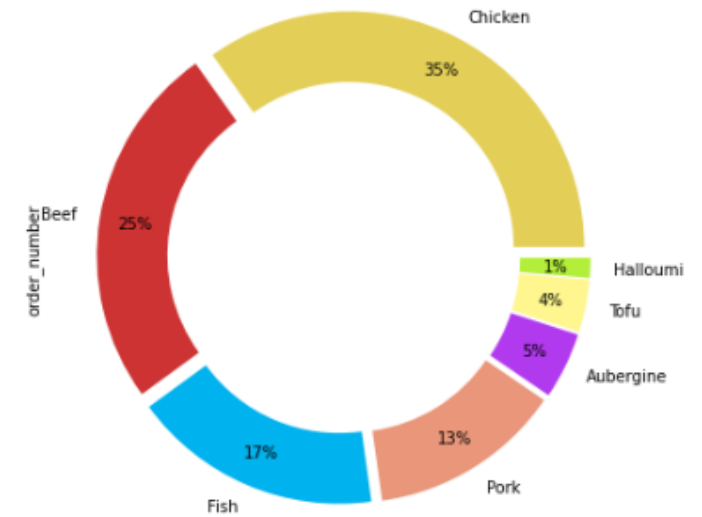
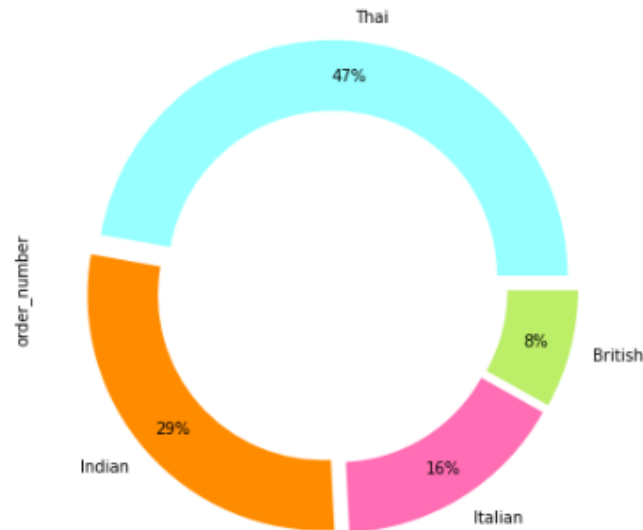
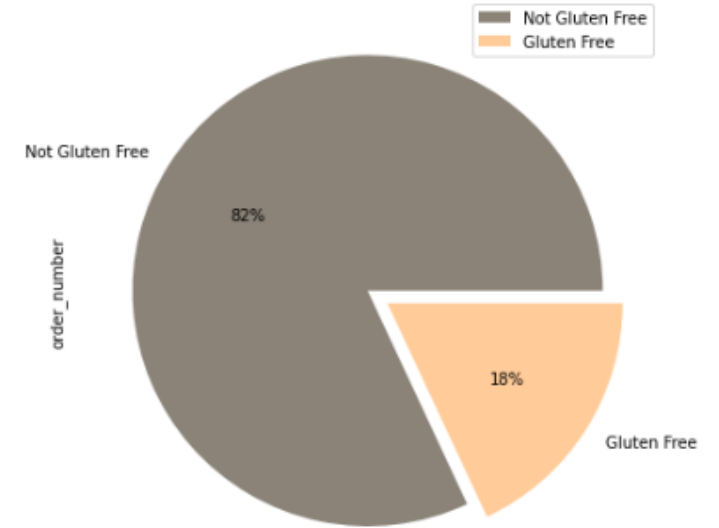
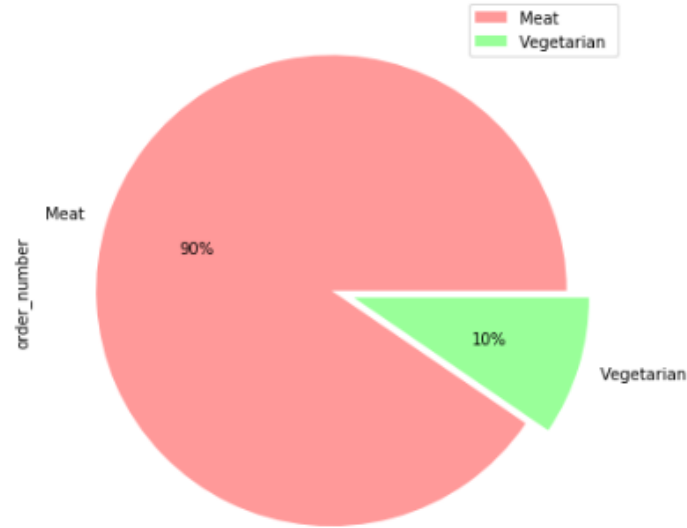


Visualization created using Tableau

Sources: <https://public.tableau.com/app/profile/nurulsaidi/viz/PartAnalysisMenu/ActualOrdersvsForecast#1>

Performances based on Ingredient Types

Menus Recipe Mix Combination with most preferred ingredients and cuisines type will potentially have higher customer demand.



Recommendations

- Optimal forecasting model requires high accuracy of predictive trend based on customer behaviour and demand elasticity.
- From this analysis, we can focus on creating a better combination of recipes in the menu to increase sales.
- It is also equally important to determine the incremental impacts of new menu initiatives and to plan resources in response to expected demand.
- There are other important factors that have not be considered in this analysis including taste score, the seasonality trend, pricing and promotion activities, sales distribution channel, resources constraint and others.

A close-up, high-angle shot of a white bowl filled with a rich, orange-red Thai curry. The curry contains chunks of white seafood, possibly shrimp or fish, and is garnished with fresh green basil leaves and a large, dark red chili pepper. The bowl is set against a dark, textured background, likely a wooden surface, which is scattered with small, golden-brown fried shallots and a few whole red chili peppers. A semi-transparent dark grey rectangular box is overlaid across the center of the image, containing the text "Thank you!" in a bold, white, sans-serif font.

Thank you!