Instacart

Marketing strategy for an online grocery store

Project Brief

Project Goals
- The task is to perform an initial data and exploratory analysis of some of their data in order to provide insights into how this strategy may be implemented to ensure that Instacart targets the proper client profiles with the right products.

Data
- The dataset comprises of information on the following parameters: Orders, Products & Departments
- The data used is an open-source data by Instacart from 2017 and is available here and also used a customer data set created and included for the purpose of this project

Tools used
- Python, Anaconda, Jupyter Notebook
- Libraries (Pandas, Numpy, Seaborn, Matplotlib, Scipy)
- Excel

Clean & wrangle Data → Merging datasets → Deriving Variables → Grouping, aggregating & Crosstab functions → Visualization with Matplotlib & seaborn
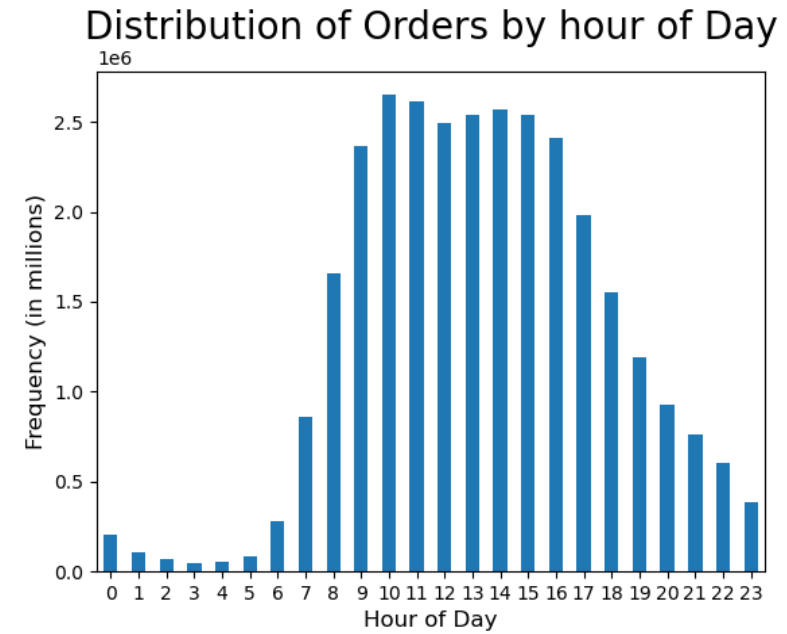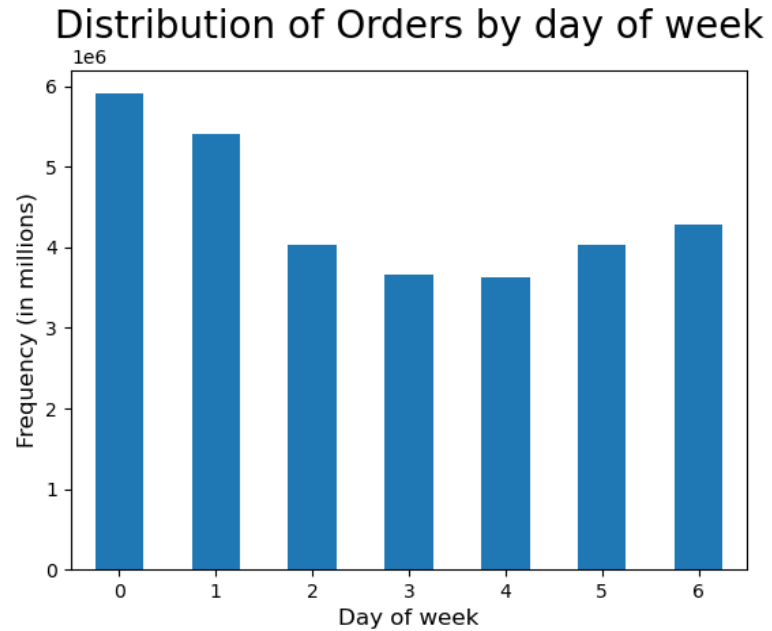
Skills
- Data Wrangling & Merging
- Deriving Variables
- Grouping & Aggregating Data
- Reporting in Excel & Population Flows
- Visualization & Storytelling with Matplotlib & seaborn

Analysis
What the busiest days of the week and hours of the day?

Distribution of Orders by day of week

Distribution of Orders by hour of Day

- The busiest days of the week are Saturday and Sunday.
- The hours between 9am and 4pm had the highest number of orders, with 10am being the peak hour for orders

Products that are more popular than others?

Distribution of Department Products Sold
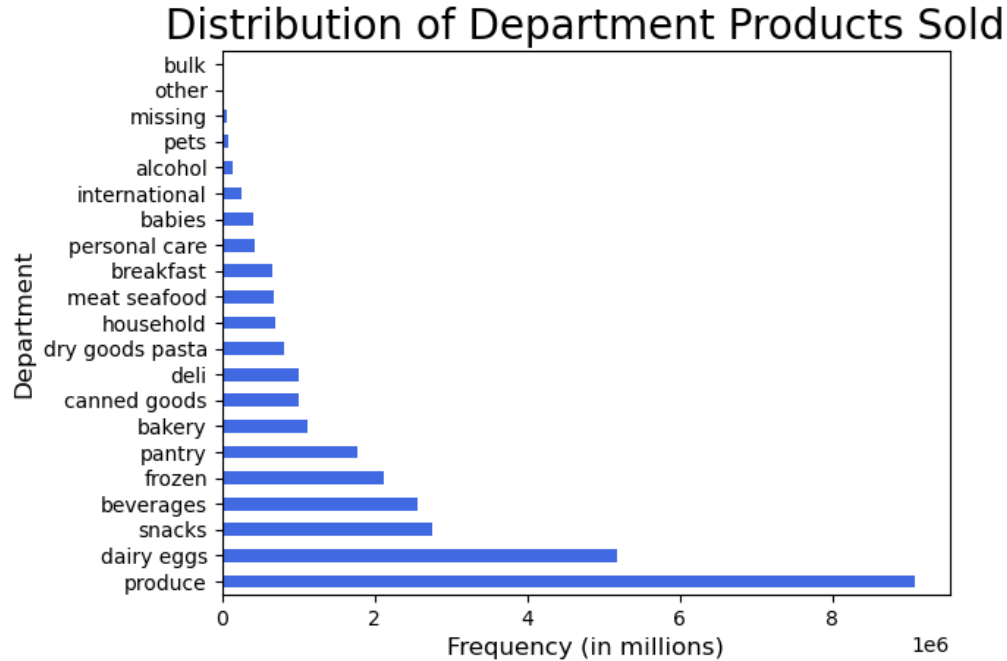
Department	Frequency
produce	9079273
dairy eggs	5177182
snacks	2766406
beverages	2571901
frozen	2121731
pantry	1782705
bakery	1120828
canned goods	1012074
deli	1003834
dry goods pasta	822136
household	699857
meat seafood	674781
breakfast	670850
personal care	424306
babies	410392
international	255991
alcohol	144627
pets	93060
missing	64768
other	34411
bulk	33451

The following are the top 5 departments in terms of the frequency of product orders:
- **Produce**
- **Dairy eggs**
- **Snacks**
- **Beverages**
- **Frozen**

Orders by Region

Orders by Region and Day

Orders by Region and Period of Day

Orders by Region and Department
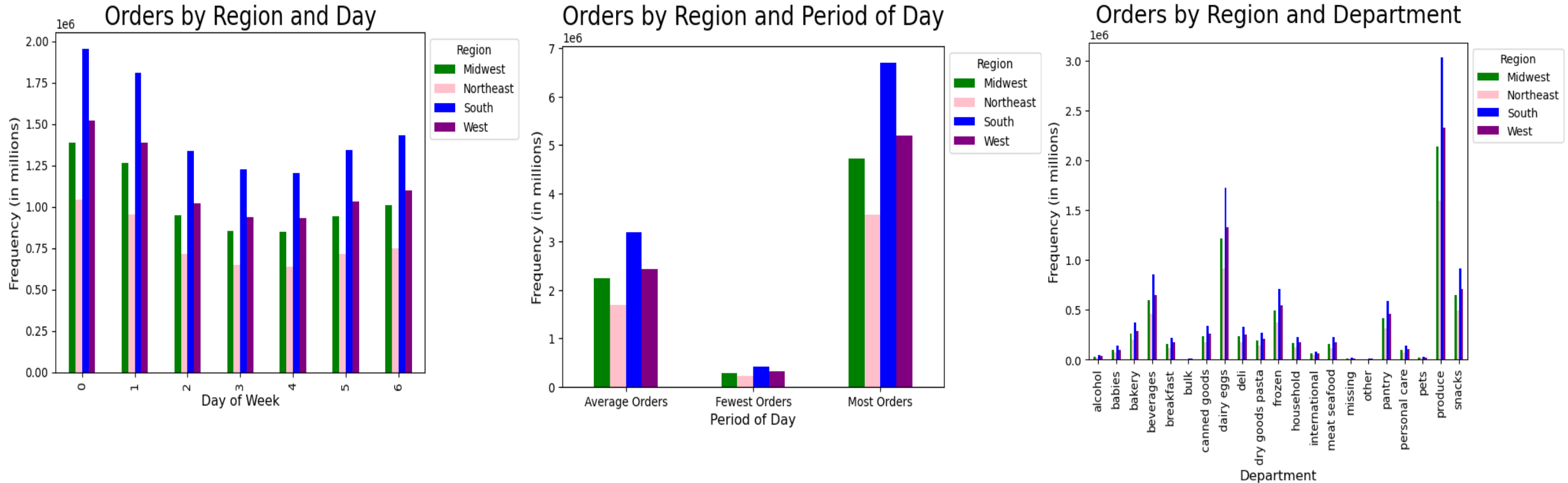
➢ The **South region** places the most orders, followed by the West region. Northeast region places the least orders.
➢ The orders placed across the day, the hours, and the department have not significantly changed buyer's purchasing habits.

Insights from Data & Recommendations

- Busiest days of the week are Saturday and Sunday
- Busiest hours of the day are between 9am to 5pm
- Top performing departments are Produce and Dairy Eggs
- Southern region has the highest amount of purchasing orders
- To encourage people to keep using Instacart's services, a loyalty/rewards program needs to be established. Based on the factors mentioned, it is also recommended to improve advertising and promotions.
- To ensure Instacart's sustained success, a further marketing campaign for certain criteria will result in an increase in purchases.

Click below to view detailed Report, Scripts & Visualizations

Let's connect and explore how I can help you achieve your business objectives

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