



Instacart Grocery Basket Analysis

Final Presentation
July 2023

* Instacart Project Overview



Objective

Perform an initial data and exploratory analysis of some of Instacart's data in order to derive insights and suggest strategies for better segmentation based on the provided criteria



Data Set

The Instacart Online Grocery Shopping Dataset 2017", Accessed from www.instacart.com/datasets/grocery-shopping-2017 via Kaggle on June 2023.



Skills

- Data wrangling
- Data merging
- Deriving variables
- Grouping data
- Aggregating data
- Reporting in Excel
- Population flows



Tools

Python
Jupyter notebooks
Excel



Background and Problem Statement

The analysis was approached acting as an analyst for Instacart, an online grocery store that operates through an app. Instacart already has very good sales, but they want to uncover more information about their sales patterns.

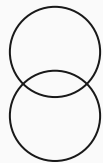
The Instacart stakeholders are most interested in the variety of customers in their database along with their purchasing behaviors. They want to target different customers with applicable marketing campaigns to see whether they have an effect on the sale of their products.



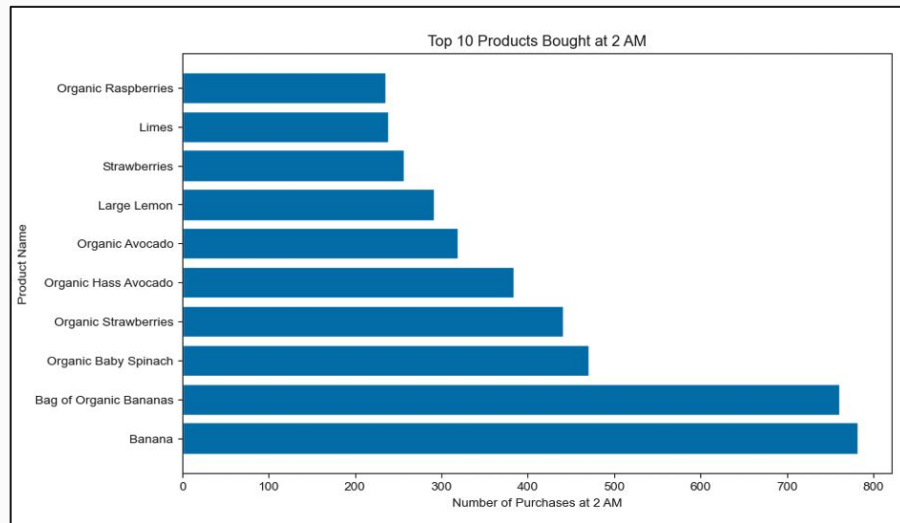
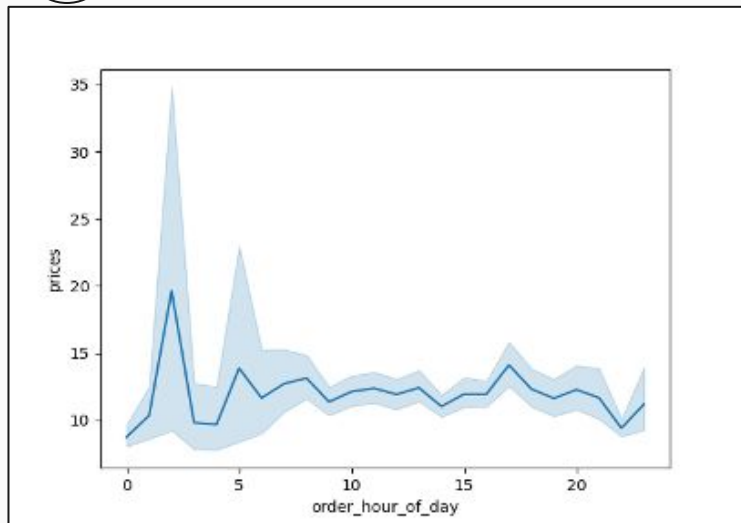


Key Questions

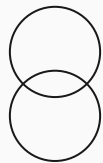
1. What are the busiest days and hours of the day in terms of purchases?
2. Are there particular times of the day when customers spend most money?
3. Are there certain types of products that are more popular than others?
4. Is there any customer profiling based on customer age, marital status and/or income?



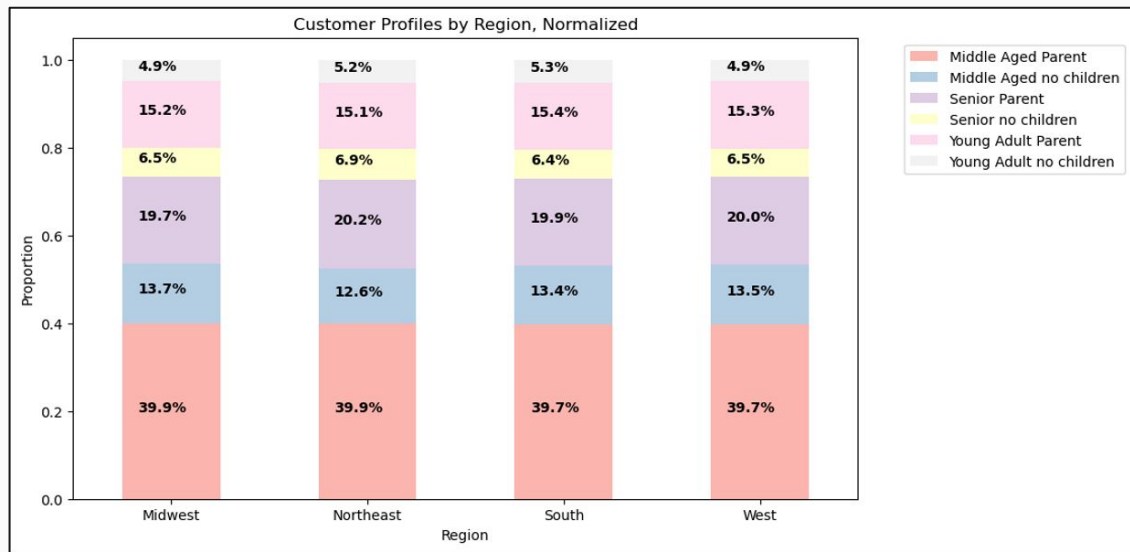
Key Takeaway 1



Instacart customers tend to **spend more money/make more expensive purchases at 2 am**. At that time, the **most popular items purchased are Bananas, Limes and Strawberries**.

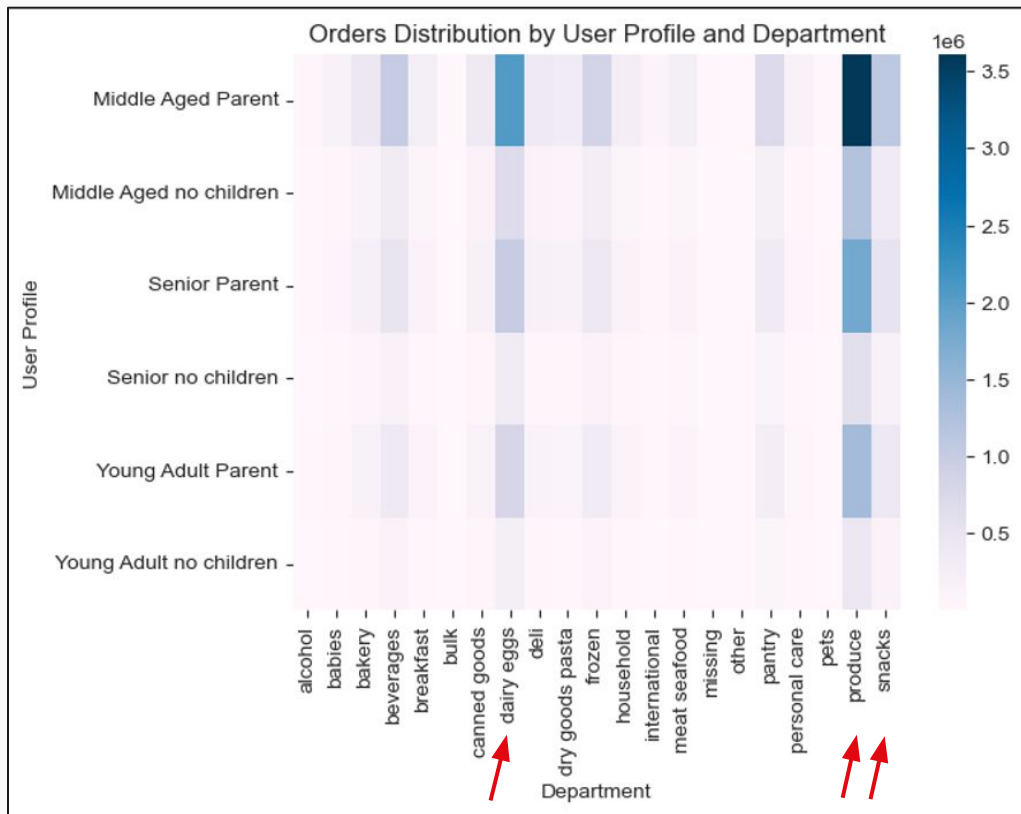


Key Takeaway 2



The **largest proportion of Instacart's customers are Middle-Aged Parents**. Next are Senior Parents and Young Adult Parents.
Distribution of customer profiles does not vary across regions.

Key Takeaway 3



'Produce' is the **most popular department across customer profiles**, followed by **'Dairy eggs'** and **'Snacks'**.

Middle-aged parents are the ones that order the most.



Recommendations



Schedule advertisement of fruits and vegetables around evening times to promote and increase sales of these products



As a great percentage of Instacart's customers are parents, the marketing/sales departments might consider implementing a new strategy to promote products in the area 'Babies' and other products that are children-focused.



Consider offering special AND unique discounts/promotions that are targeted to less active customer profiles either in the way of personalized emails or even regular mail



Challenges

- Data analysis turned occasionally complicated while dealing with large amounts of data. This was resolved by changing data types of variables in data frames used for analysis. For further information about data wrangling, please refer to final report.



* Project Deliverables



Project
Brief



Python
Scripts



Final
Report



Thanks!

Do you have any questions?

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