Zosya Trimbacher

Data Analyst

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LinkedIn

GitHub

Tableau

About me

Hi, I’m Zosya Trimbacher — a data-driven problem solver with a background in operations and executive support in fast-paced tech environments.

After nearly five years at Delivery Hero, where I worked closely with global leadership and helped streamline internal processes, I decided to pivot toward data analytics to deepen my ability to uncover insights and support smarter decision-making.

Since then, I’ve developed a strong foundation in tools like SQL, Tableau, Excel, and Python, and I’ve built project work focused on operational performance, reporting, and customer analysis.

My goal is to apply both my operational experience and analytical skills in data-focused roles.

Instacart

To help Instacart improve customer segmentation and marketing by analyzing order patterns, spending behavior, and product preferences.

Data merging, Wrangling, Profiling, Descriptive analytics.

Python Excel Tableau

Instacart Analysis

U.S. online grocery company used data analytics to uncover customer behavior patterns, identify peak purchasing times, and create marketing strategies tailored to different user segments.

OBJECTIVES

- Identify the busiest days and times for grocery orders to inform ad scheduling.
- Understand when customers spend the most to guide product promotions.
- Determine the most frequently purchased product types.
- Segment customers by behavior and demographics to support targeted marketing.

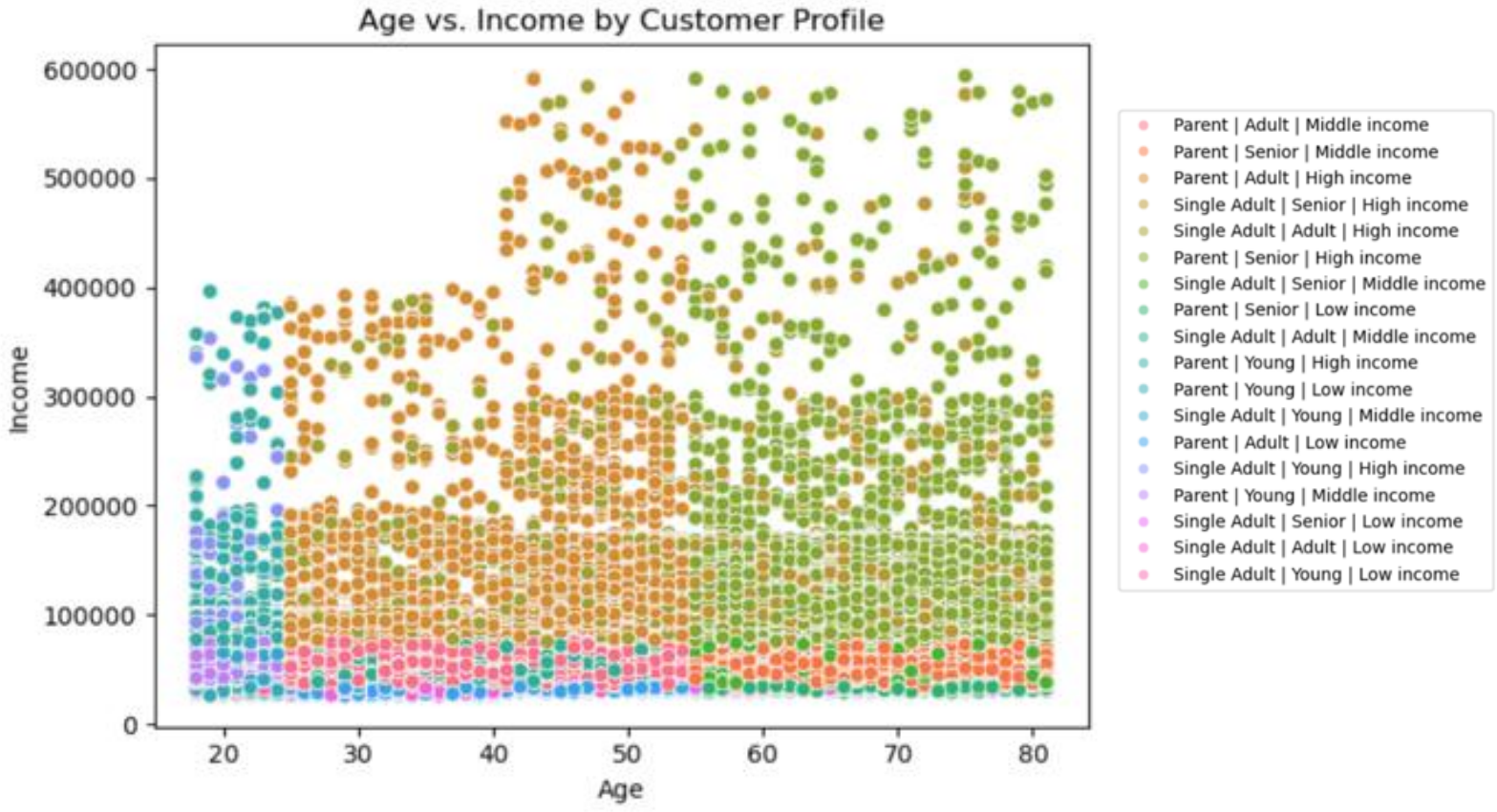
METHODS

- Imported and cleaned Instacart dataset using pandas.
- Conducted consistency checks (duplicates, missing values, mixed types).
- Merged and streamlined data for analysis.
- Created new columns using conditional logic, functions, and flags (e.g., loyalty, spend).
- Segmented customers by profile (e.g. single adult, parent, low spender).
- Aggregated key metrics by customer groups, time, and product categories.
- Built visualizations (bar, line, histogram, scatter) to highlight trends in orders, spend, and product demand.
- Analyzed regional behaviors and generated insights using Python.

DATA

Sourced from the Instacart Online Grocery Shopping Dataset 2017 (via Kaggle) . Link to my GitHub is here.

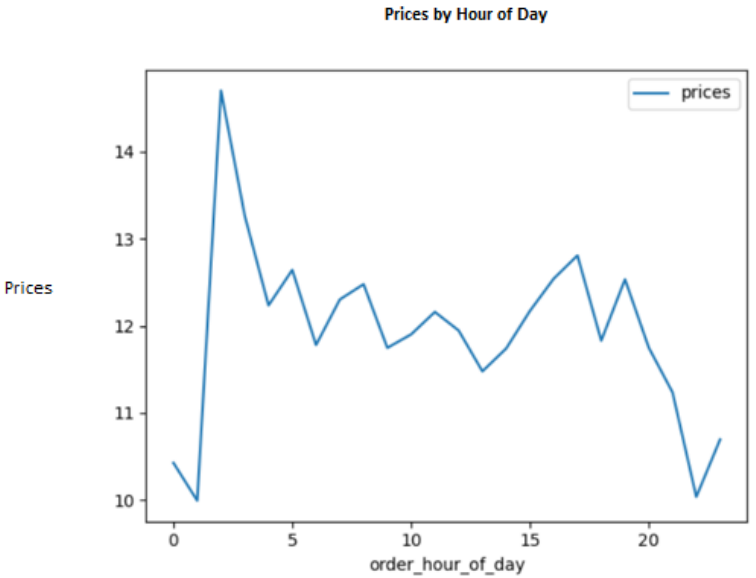
Age by Income Relationship Comparison



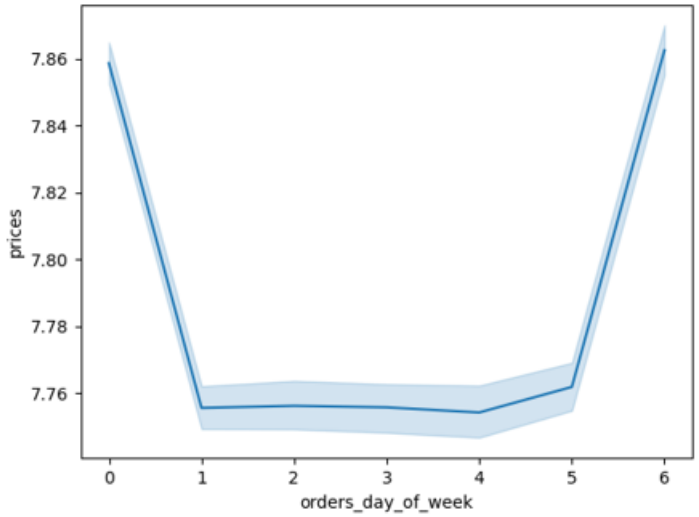
This chart highlights the relationship between age and income across different customer profiles.

- There's no strong linear correlation between age and income; earnings vary across all age groups.
- Most incomes cluster below $200,000, but higher-income groups are seen among middle-aged and senior adults.
- Younger customers tend to fall into low- and middle-income brackets.
- Profiles show broad diversity, with middle-income adults and parents making up a large portion of the customer base.

Prices by hour of day and day of the week



Notes: *To keep the line chart clear, I grouped data by hour and used average prices instead of raw values.*

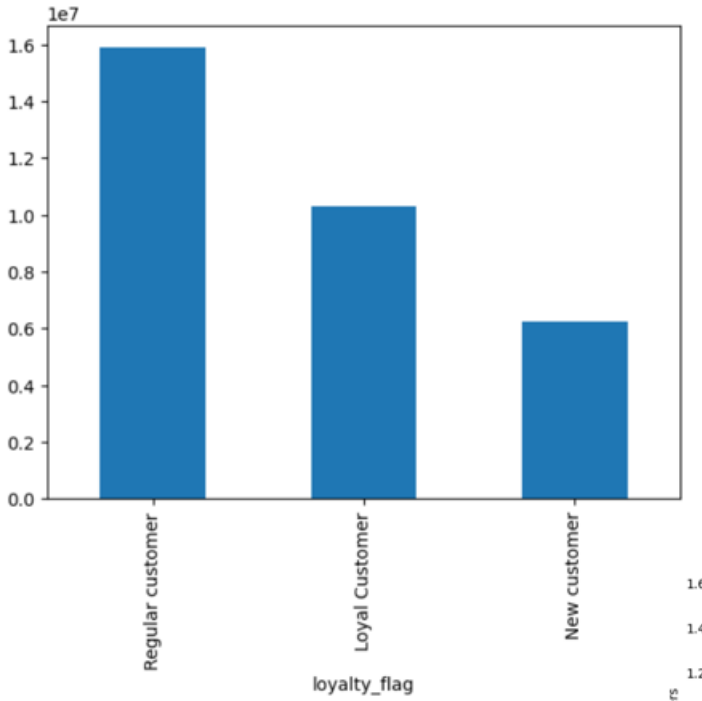


This analysis reveals patterns in when customers tend to spend the most money, based on average prices by hour and day.

- Spending peaks early in the morning, with the highest prices around 4:00–5:00 a.m., followed by a sharp drop by 9:00–10:00 a.m.
- A second upward trend occurs in the evening between 8:00–10:00 p.m.
- Weekend pricing is highest on Saturday and Friday, while Monday marks the lowest average prices.
- Tuesday through Thursday show relatively stable, mid-range pricing activity.

Customer Loyalty Insights

1st



2nd

The **first chart** highlights the distribution of Instacart users by loyalty status, showing that:

- Regular Customers make up the largest segment, indicating frequent but not highly committed users.
- Loyal Customers form a strong core group of repeat shoppers.
- New Customers, while smallest, suggest ongoing platform growth.

The **second chart** explores ordering habits based on loyalty:

- Low spenders dominate across all loyalty categories, regardless of loyalty level.
- While Regular Customers have the highest count of high spenders, the difference is small, suggesting high spenders are a minority overall.

Recommendations

- Optimize timing strategy: Run ads and promos on quieter days like Wednesday and during low-engagement hours (6–8 am, 5–10 pm). Avoid overcrowding peak times like weekends and midday hours.
- Target high-value shoppers: Early mornings (4–5 am) and late evenings (8–10 pm) see spending spikes. Use these insights to push premium products and bundle offers.
- Prioritize mid-tier pricing: Most products fall in the $5–15 range. Bundle common items and offer promotions for high-end categories like pasta sauces or imported goods.
- Promote top departments: Focus marketing on Produce, Dairy & Eggs, Snacks, Beverages, and Frozen. Use incentives in underperforming departments to stimulate trial.
- Focus on retention: Regular customers form the biggest segment. Offer loyalty upgrades and tailored onboarding for new customers to increase return rates.
- Encourage spending growth: All customer types are mostly low spenders. Implement tiered perks and spend-based incentives to nudge users up the value chain.
- Segment by family size: Segment marketing for families with 0–1 vs. 2+ dependents. Promote bulk offers to larger households and personalized bundles to small families.
- Refine demographic targeting: Middle-aged users dominate, but higher incomes are common among 40+ users. Build personalized campaigns for seniors and budget-conscious young adults.

Instacart (Python + segmentation project)

Project Challenges & Reflections

Challenge

- Very large dataset (3M+ rows).
- Duplicates, missing values, inconsistent types.
- Hard to build meaningful profiles initially.

Solution

- Cleaned data with pandas consistency checks.
- Derived loyalty + spend flags for segmentation.
- Grouped customers by profile and visualized behaviors.

Reflection

- Customer profiles worked well for marketing insights.
- Large dataset slowed operations at times.
- Next time: sample earlier + optimize functions.