# OkTY & UCLA DataRes

## Fall 2023 Deliverable

# Our Team

Jane Zou

Alyssa Lung

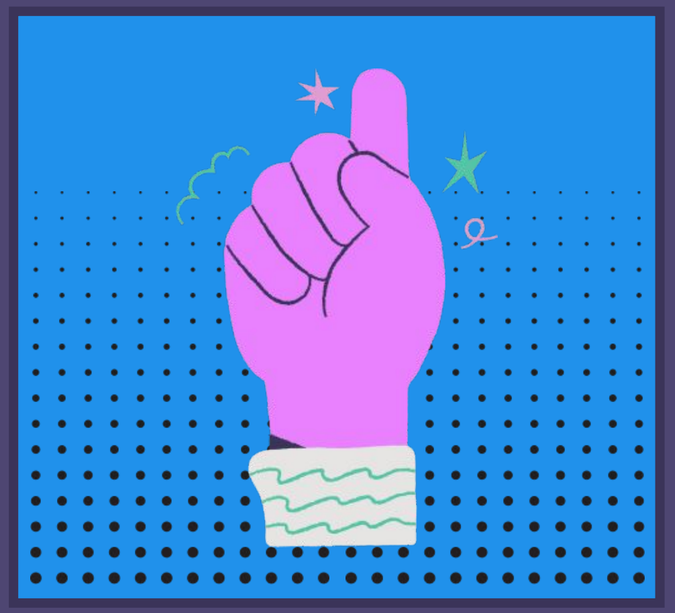
Tian Ouyang

Megan Jacob

Irene Zhang

Katherine Huynh

# Table Of Contents

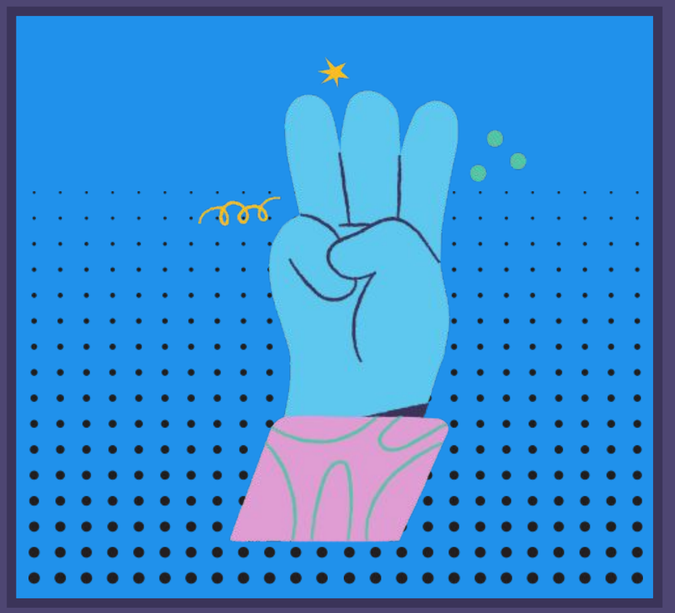


## Project Scope

How to get the right product in front of the right customer at the right time

## Data Analysis

Improve Plaid tagging accuracy, explore and explain trends in consumer spending



## Next Steps

Deliver business insights to OkTY stakeholders and next steps for machine learning models

# Fair Trade Data.

Let's create a more inclusive economy, starting with the people who actually power it.

That means you.

Welcome to the Data Revolution, where it **PAYS TO BE YOU!**

01

# Project Scope

# About OkTY

Ok, Thank You

## User Data

Personal Data - First name, last name, email, address, gender, and mobile number.

## Institutions

Information from user's financial institutions via Plaid Technologies Inc.

## Location Data

Real time tracking and aggregation of geographic location.

# Our Expected Progress

## Fall 2023

### Plaid Data Analysis

Financial records of past two years, location data, spending habits

## Fall Demo

### Focusing of Consulting Objectives

Build upon previous cohort of DataRes consulting work to further improve tagging accuracy

## Winter 2024

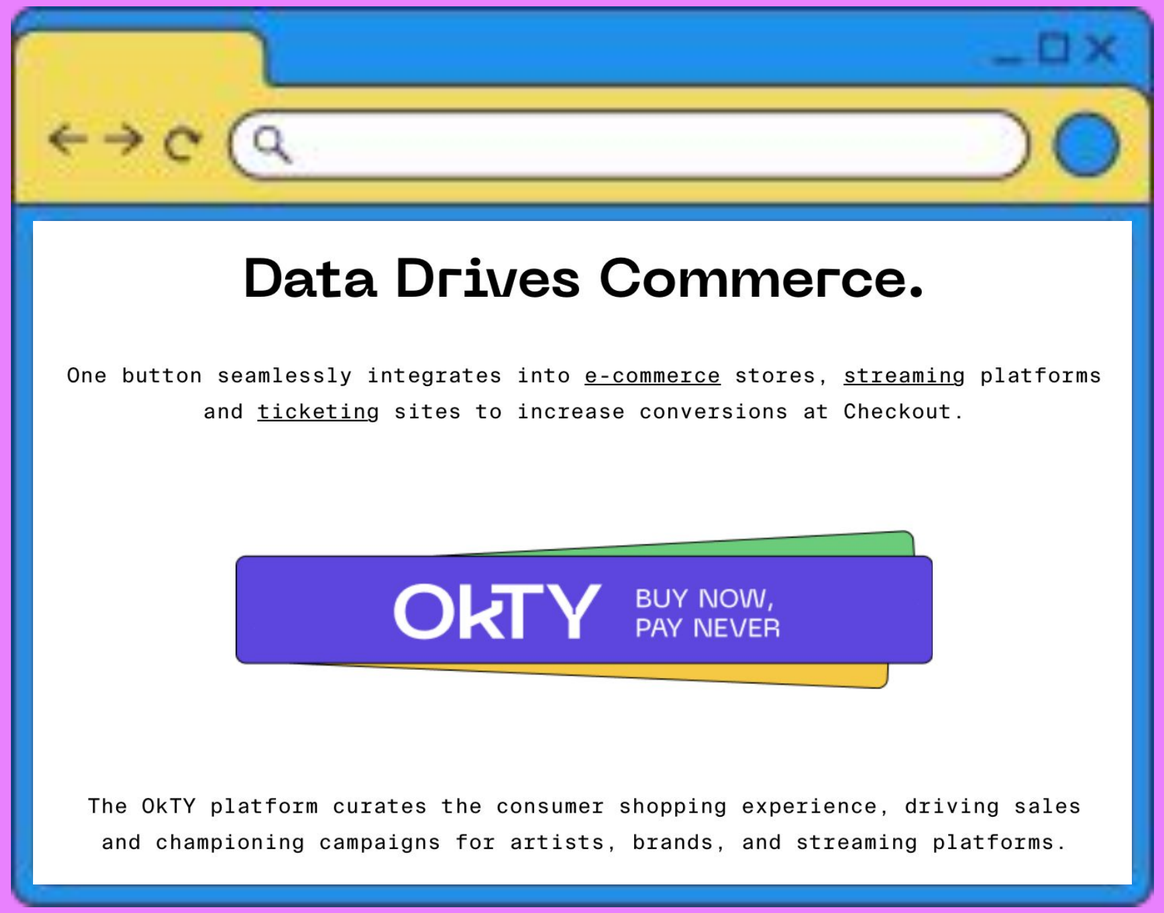
### Develop & Tune Clustering & Regression Models

Group users together based on demographic and spending data, anticipate spending at major brands

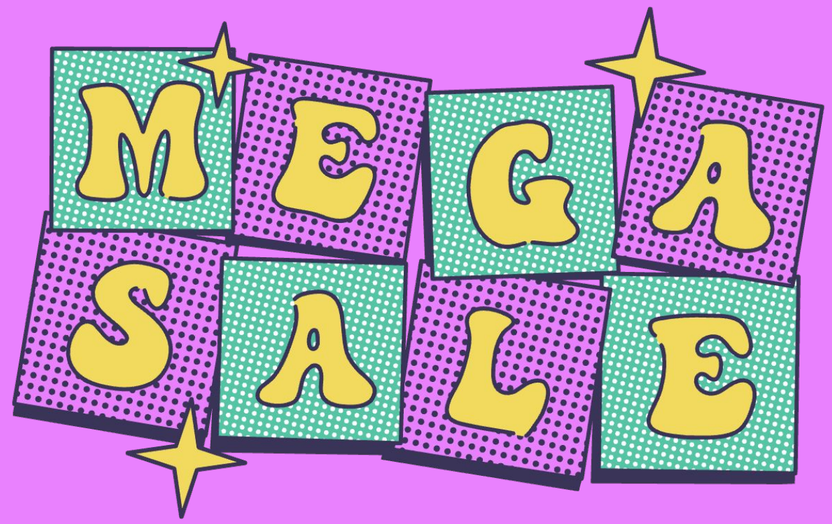
## Winter Demo

### Connect to Live Streaming Data to Predict Spending

Input a user ID and output the weighted probability of engaging with a given brand, considering amount spent, location, and time



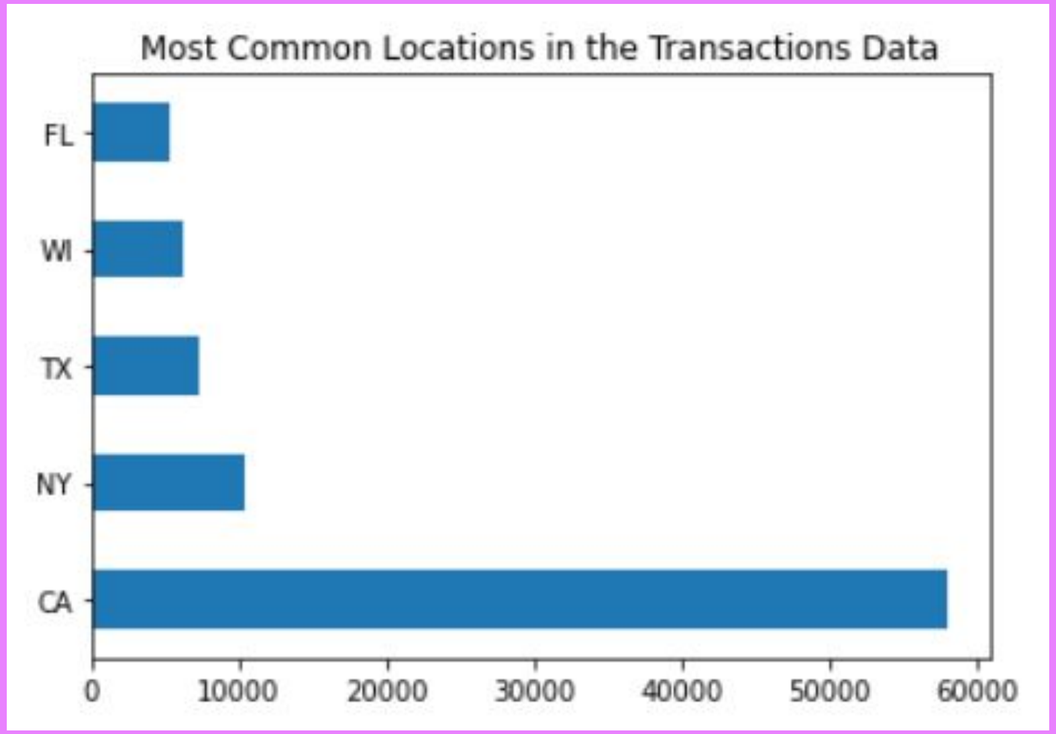

02

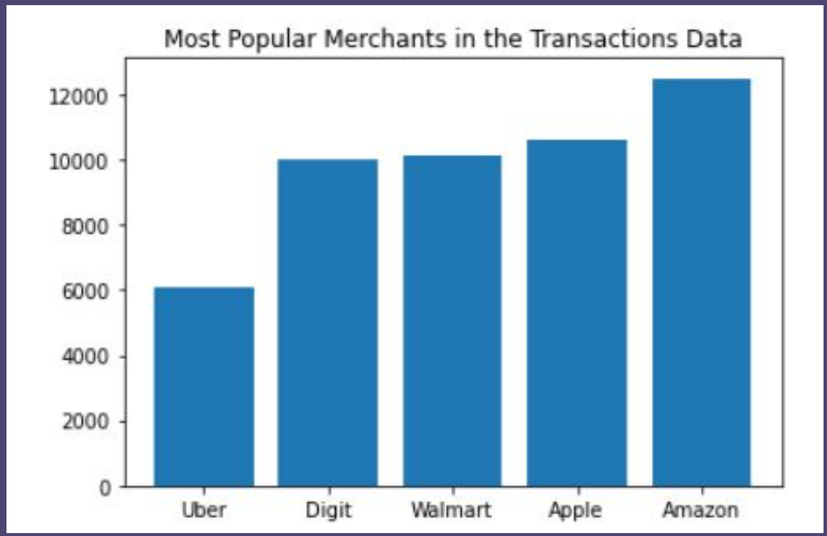


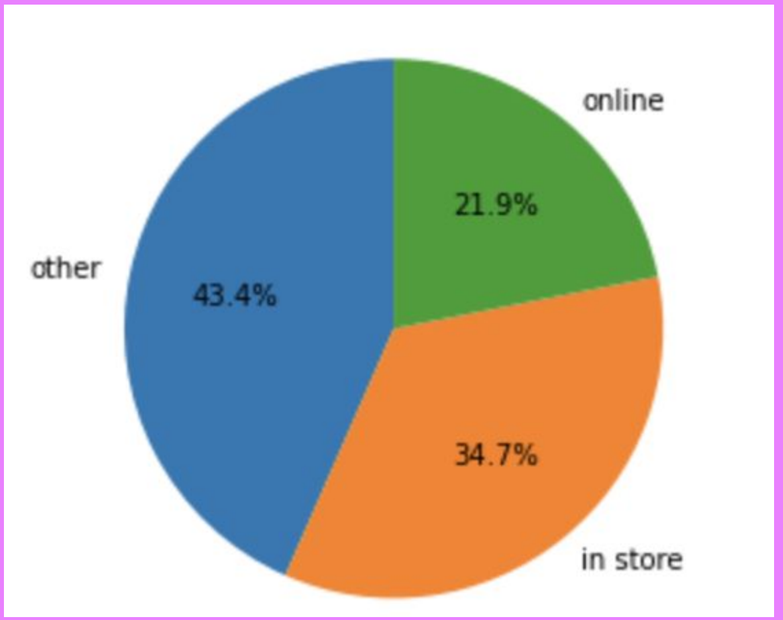

# Data Analysis & Visualizations

# Data Exploration

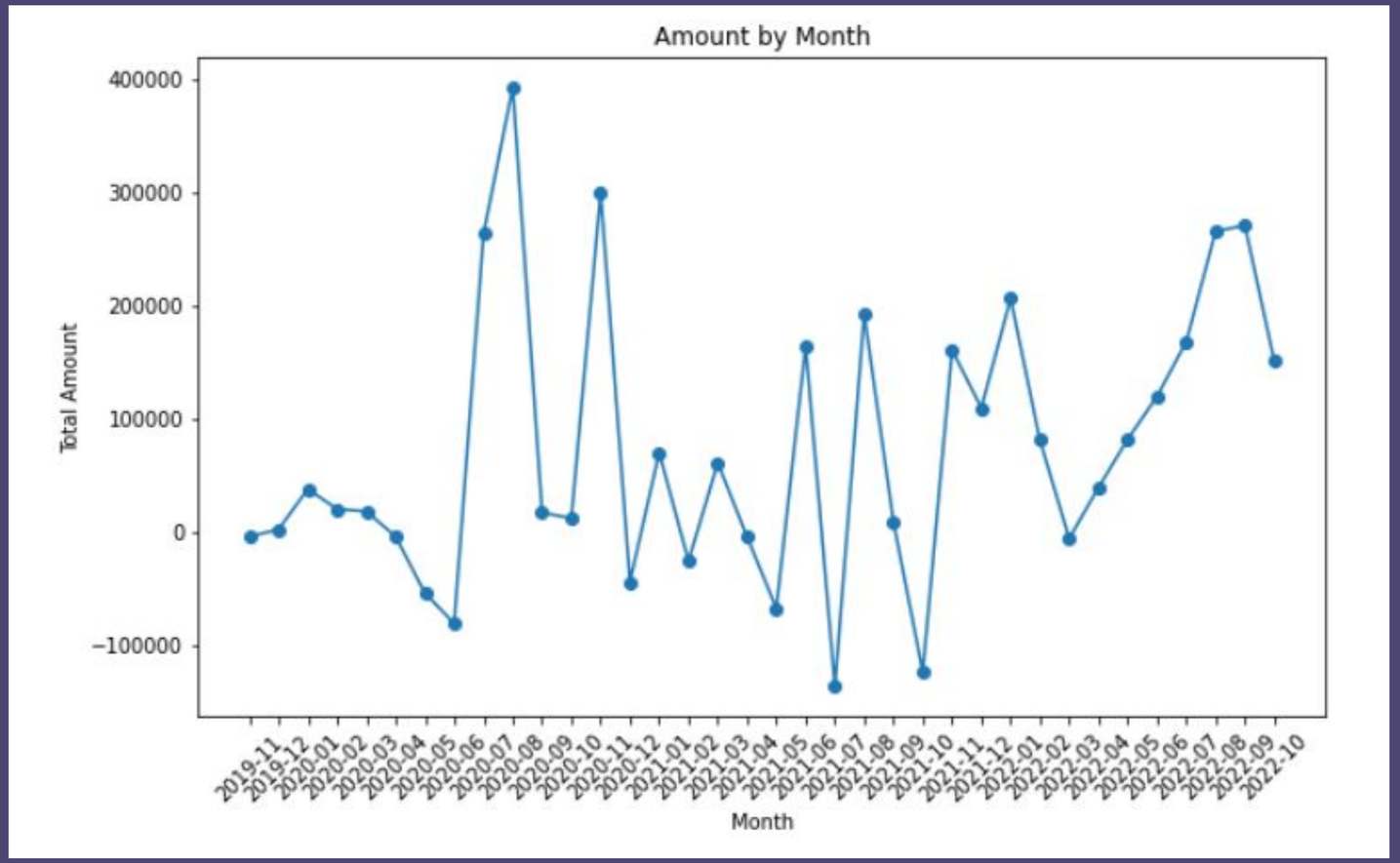
- Transactions
  - Over 1000 have amount 0
  - 863 unique accounts, most <200
  - Unknown merchants make up 45%
- Duplication in data
- “Other” in payment channel refer to transactions such as rideshare service
  - Accounts for 43% of all transactions



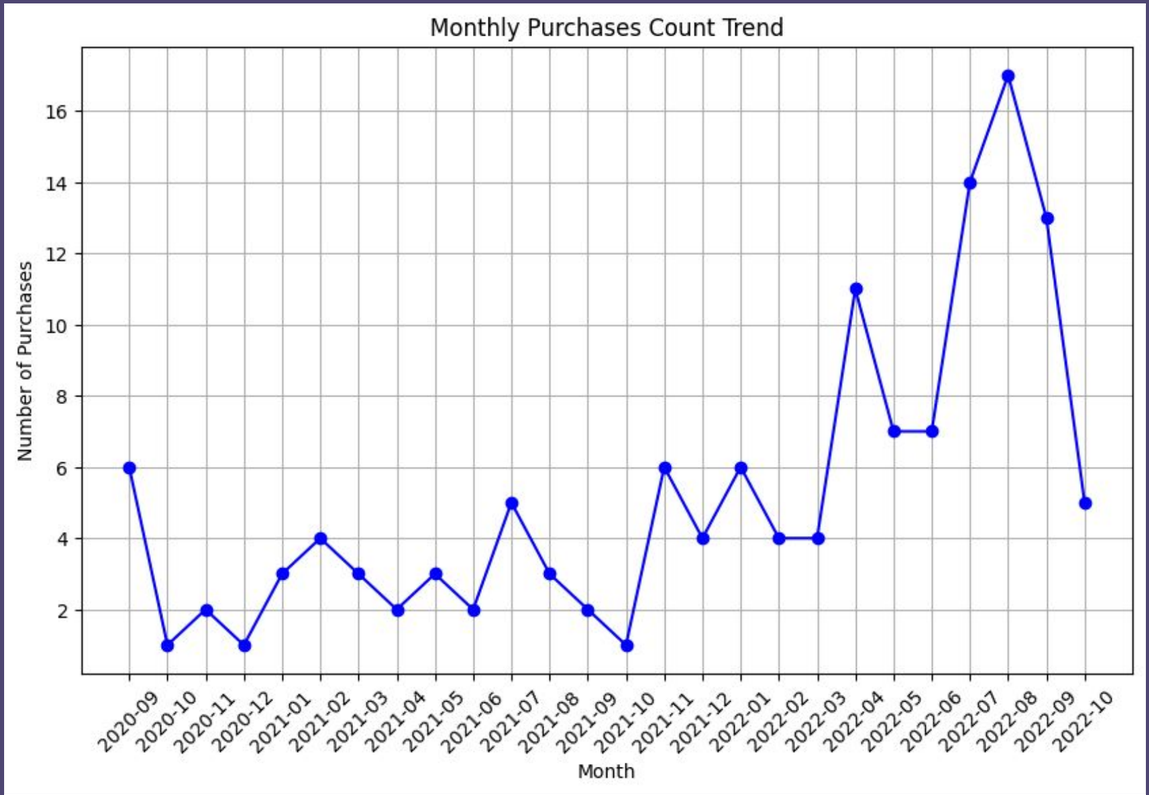
- 227 merchants have a negative transaction
- $29,662,969 accounted for in negative transactions
- Multiple merchants with a total amount negative
  - Income recorded through OkTY

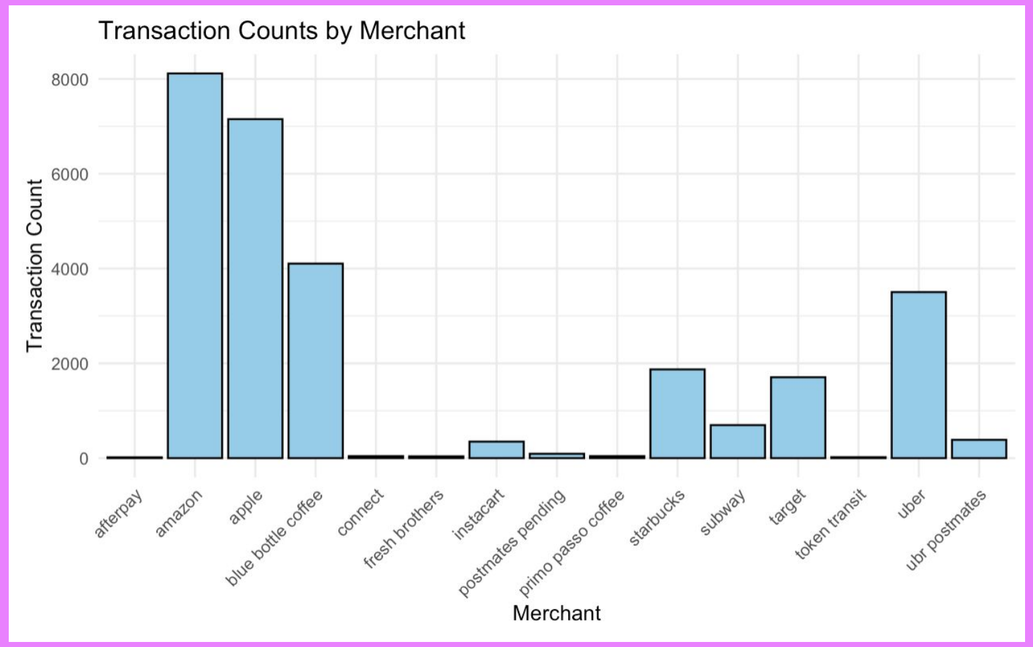


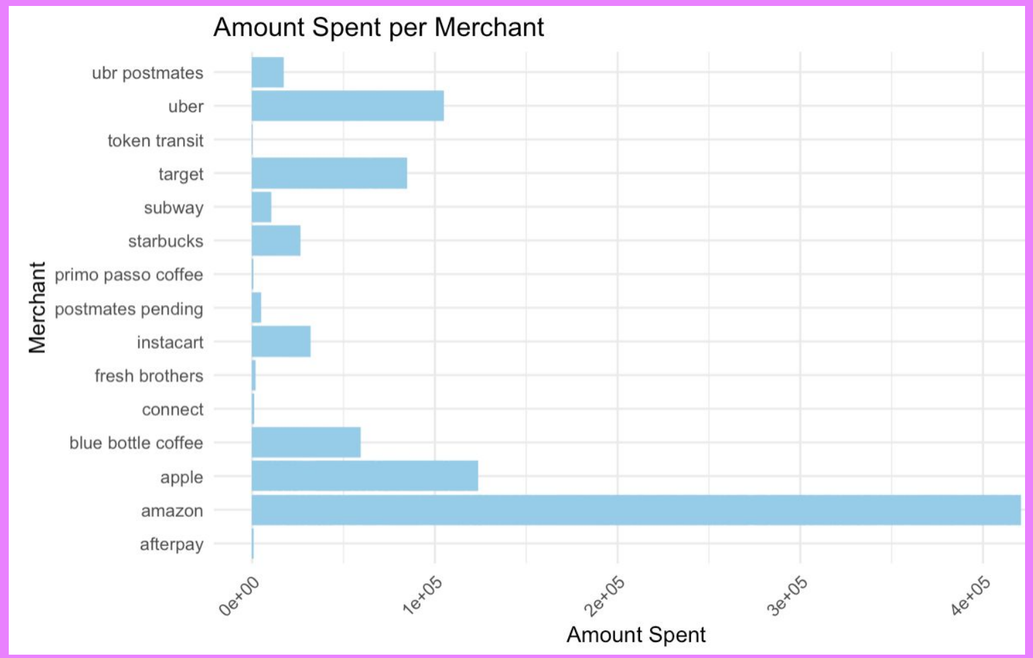

# Negative Transactions

# Transactions Trends

- Growth from last year to this year ⇒ when more people are using the app
- Purchases peak during summer



# Location

- US and international
- Most prevalent states

Use UCLA account:
https://drive.google.com/file/d/1FtNyYB19irBNvQJHODP51Dgnf6BatyoY/view?resourcekey

# Regional Trends

## West

**Supermarkets & Groceries: 22.2%**

2) Restaurants: 22.2%
3) Computers & Electronics: 22.2%
4) Music, Video, DVD 22.2%
5) Parking: 11.1%

## South

**Digital Purchase: 38.1%**

2) Gas Stations: 19.0%
3) Computers & Electronics: 19%
4) Fast Food: 14.3%
5) Restaurants: 9.5%

## Midwest

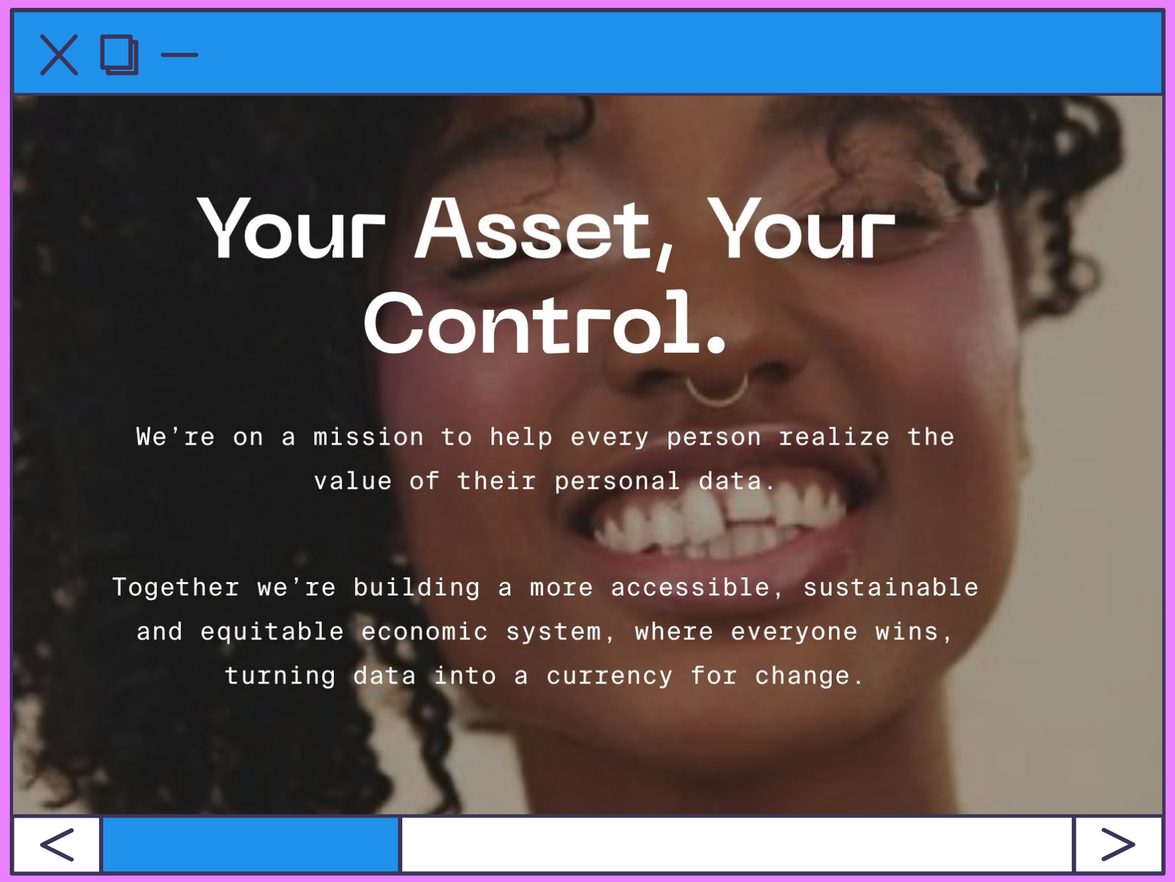
**Supermarkets & Groceries: 35.3%**

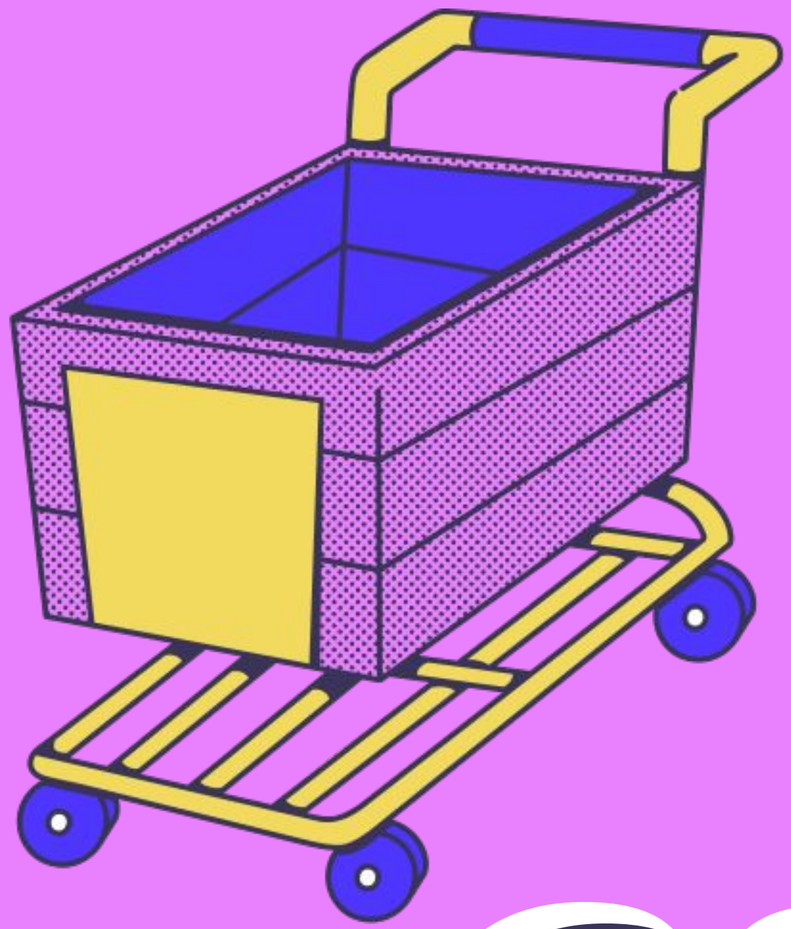
2) Financial: 23.5%
3) Digital Purchase: 17.6%
4) Computers & Electronics: 17.6%
5) Food and Drink: 5.9%

## Northeast

**Computers & Electronics: 31.6%**

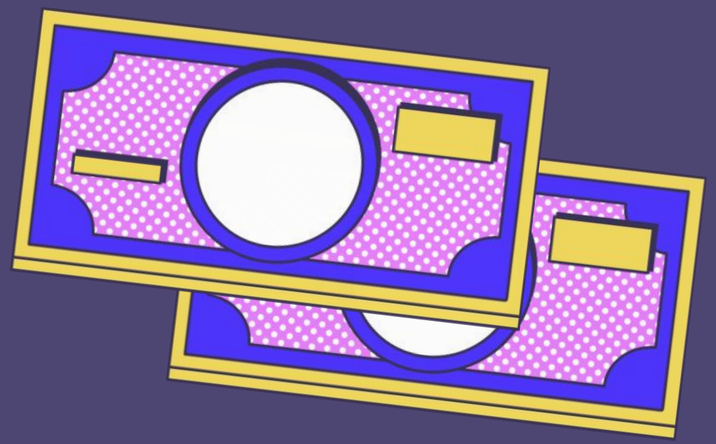
2) Digital Purchase: 26.3%
3) Restaurants: 15.8%
4) Supermarkets & Groceries: 15.8%
5) Paypal: 10.5%



# Next Steps

# 03



**Approach 1**

# Clustering

- Select key features using importance ranking
- Perform K-means clustering or hierarchical for nested relationships
- Identify common traits, spending habits, preferences

**Approach 2**

# Regression

- Introduce more relevant features to enhance prediction accuracy
- Explore ensemble methods to improve performance
- Connect model to streaming data to adjust in real-time

Ok, thank you!