



# Data Club of Notre Dame

Spring 2025

34.51°



## Introductions

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# Prompt Overview



## Description:

Kroger has collected 1 year of transactional data on 2,469 households who are frequent shoppers. Relevant data also available include product and promotional data.

## Problem Statement:

It's time for Kroger's Department of Grocery Annual Review! Kroger Category Managers meet each year to better understand how well each Category in Grocery is performing. Category Managers need a way to holistically view how well their categories have performed within the last year.

## Task:

Build a dashboarding tool that will allow a user to click through high level metrics surrounding Sales Activity, Assortment, Promotions, and/or Customer Segmentations.



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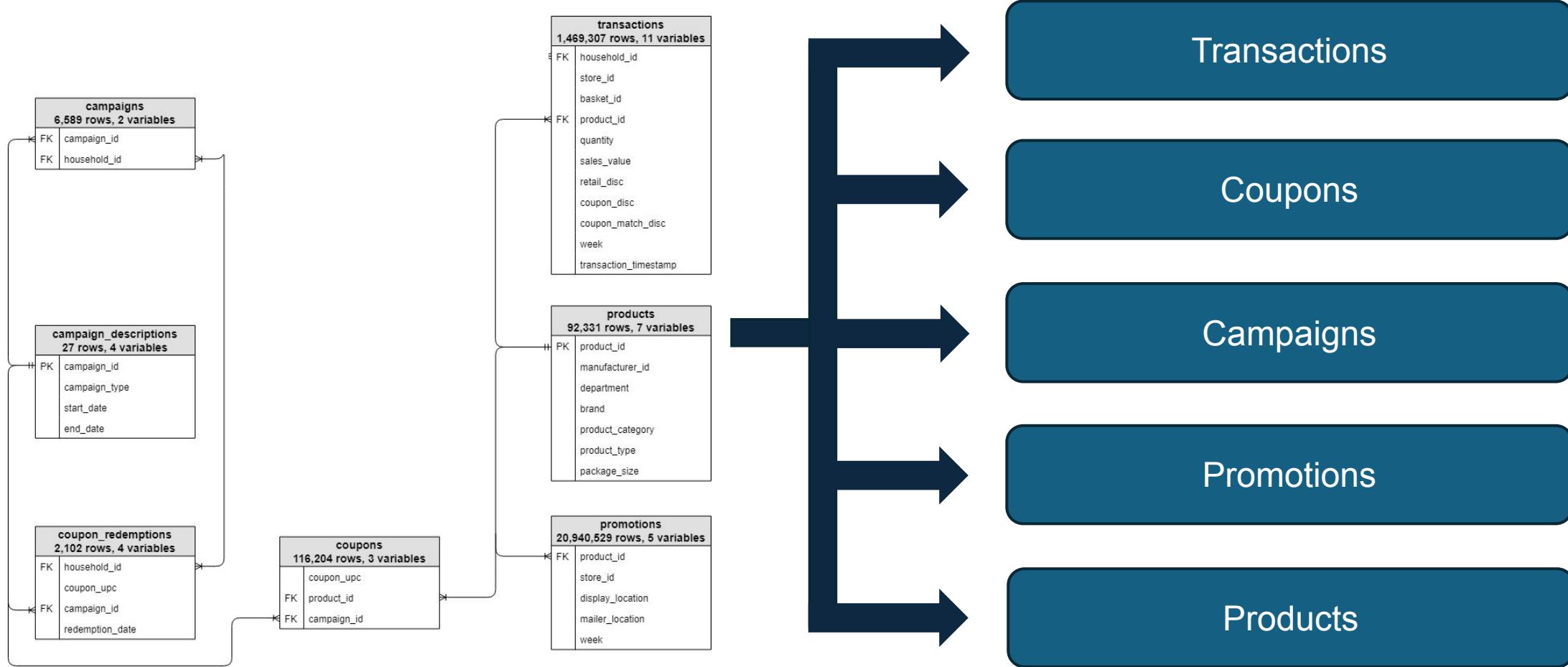
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# Our Approach





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# Cleaned and Prepared Data



## Main Datasets:



# Cleaned and Prepared Data



Main Transactions

## Description:

- Merge transactions dataset with every other dataset that adds information
- Contains information of transaction, product description, coupon redemption with campaign type of specific coupon (if applicable), and display and mailer location (if applicable)
- Cleaned dataset by focusing on GROCERY department and removing inconsistent sales data based on both weekly sales and specific transactions. We removed weeks 1 and 53 since they were incomplete as well as specific transactions with a sales value of \$0 or quantity of 0.
- Membership status: we defined Loyalty customers as those who received a retail discount, and Non-Loyalty to those who did not.

# Cleaned and Prepared Data



## Promotions

### Description:

- Removed rows containing NA values of Display Locations and Mailer Locations
- Grouped Display Locations and Mailer Locations for clarity

Promotions								
Display Location				Mailer Location				
Display	Front of Store	Back of Store	In Aisle	Feature Ad	Coupon Ad	Free Ad	Non-Ad/Line-item Ad	
<ul style="list-style-type: none"><li>• Display Secondary Location Display</li><li>•</li></ul>	<ul style="list-style-type: none"><li>• Store front</li><li>• Front end cap</li></ul>	<ul style="list-style-type: none"><li>• Store rear</li><li>• Rear end cap</li></ul>	<ul style="list-style-type: none"><li>• Mid-aisle end cap</li><li>• Side-aisle end cap</li><li>• In-aisle</li><li>• In-shelf</li></ul>	<ul style="list-style-type: none"><li>• Interior page feature</li><li>• Front page feature</li><li>• Back page feature</li><li>• Wrap front feature</li><li>• Wrap back feature</li></ul>	<ul style="list-style-type: none"><li>• Wrap interior coupon</li><li>• Interior page coupon</li></ul>	<ul style="list-style-type: none"><li>• Free on interior page</li><li>• Free on front page, backpage, or wrap)</li></ul>	<ul style="list-style-type: none"><li>• Not on ad</li><li>• Interior page line item</li></ul>	

# Cleaned and Prepared Data



## Campaigns / Coupons

### Description:

- Use campaigns and coupons data to identify targeted households, household redemption rate, redeemed coupon percentage, and revenue associated to different campaign types.
- Generate dataset of only the transactions associated with a coupon redemption

Campaign Type	Distinct Households Targeted	Total Revenue Generated	Household Redemption Rate	Redeemed Coupons Percentage Breakdown
Type A	1,490	\$5,328.28	20%	89%
Type B	995	\$421.08	6%	9%
Type C	397	\$95.19	5%	2%



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# Dashboards and Recommendation



tableau<sup>+</sup>public

Data Club 84.51 Dashboard



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# Future Research



## Campaigns:

- Identify what type of discount was associated with each campaign type (50% off, buy 1 get 1 free)

## Promotions:

- Learn more about each display and mailer location to make sure that the generated groupings are appropriate for our analysis

## Transactions:

- Have a clearer understanding of how coupons and discounts are applied to each transactions. Ex: Some transactions were associated with a coupon redemption but had no coupon discount.

## Dashboards:

- Expand to include dashboards for different departments other than GROCERY.
- Add more dashboards to learn more about the performance of different product types within a category.



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# Q & A

