



# Love's Travel Stop Case Competition

## Group 109



# Our Team

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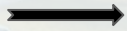
**Data Analyst**  
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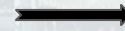
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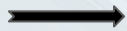
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Conclusion



# Campaigns





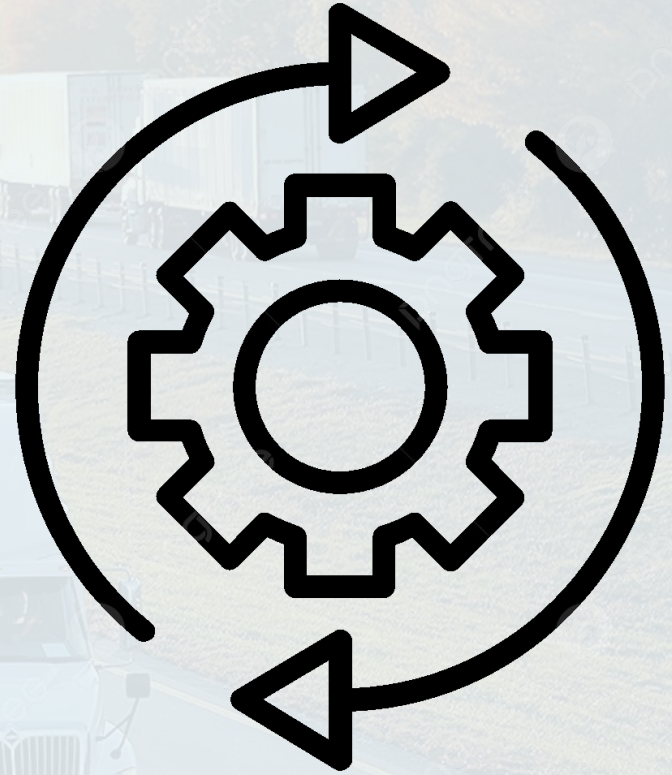
**Which campaign(s) deliver  
the most net-benefit to  
Love's, through incremental  
fuel gallons, fuel visits and  
merch sales?**





# Methodology

- Analyzed the “Driver Monthly Campaigns” dataset
- Calculated the difference between current month and previous month performance.
- Visualized quarterly trends using line graphs

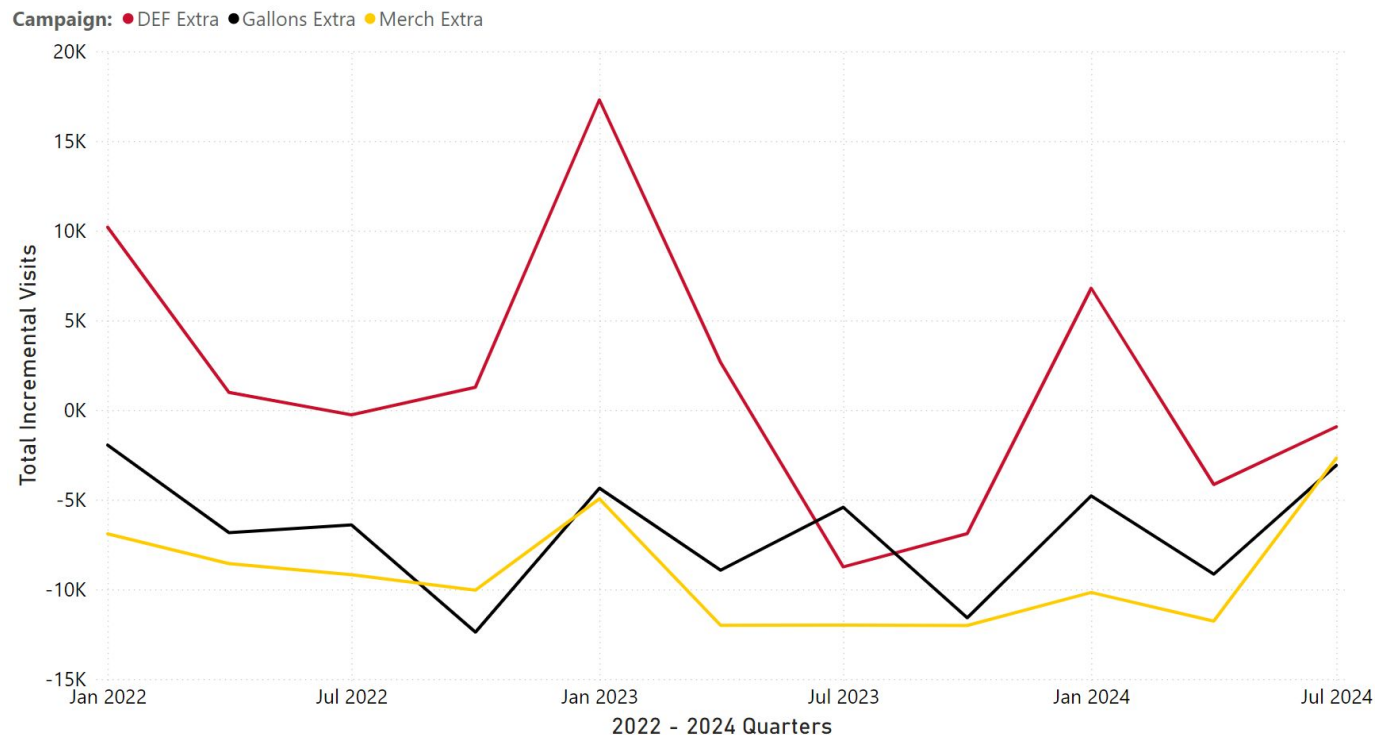


# Campaign Benefit Analysis

## Findings

- DEF campaign outperforms the other campaigns.
- Gallons and Merch campaign are identical in trend.

## Incremental Visits by Quarter

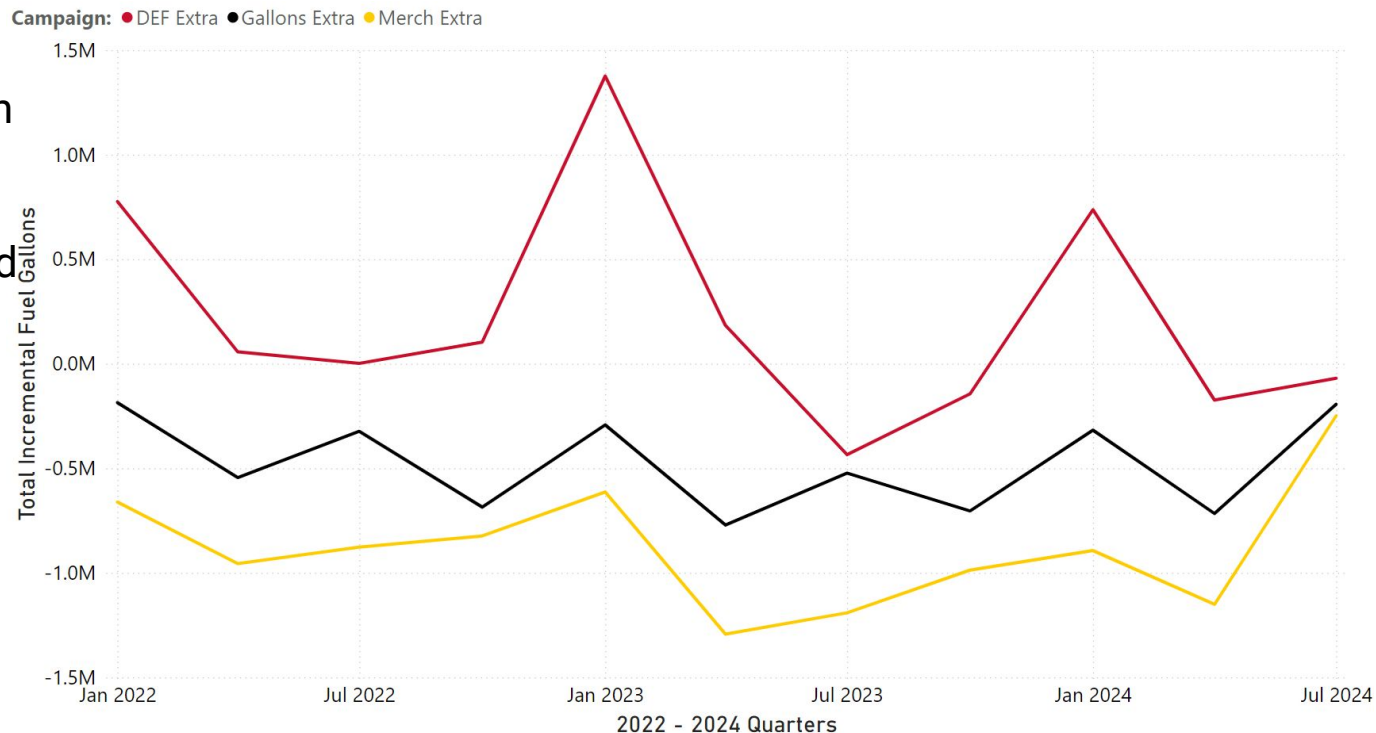


# Campaign Benefit Analysis

## Findings

- Data for fuel gallons mirrors the trends with visits.
- Gallons Extra expected to perform well.

## Incremental Fuel Gallons by Quarter



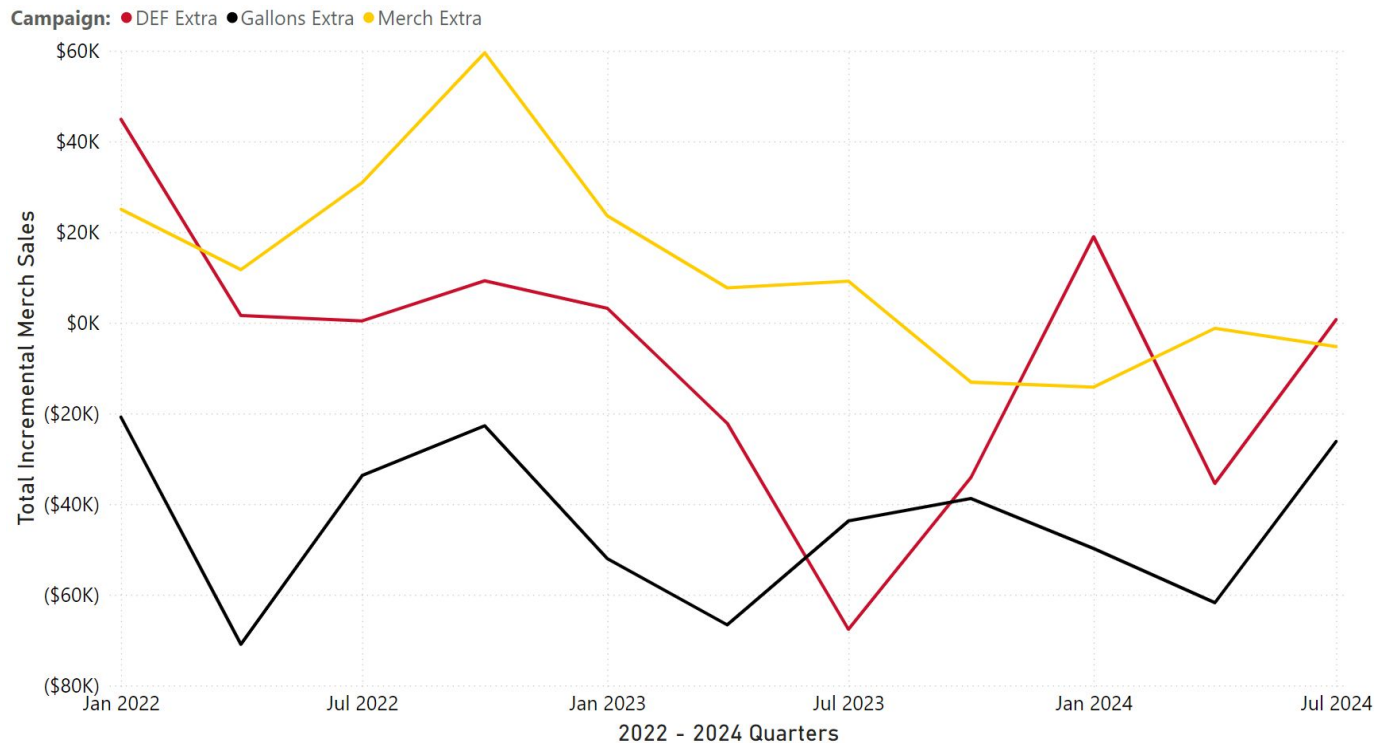


# Campaign Benefit Analysis

## Findings

- Merch campaign is dominant even with fewer visits.
- Merch sales are less dependent on visits.

## Incremental Merch Sales by Quarter



# Recommendations

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- **Customer Feedback**
- **Personalization**
- **Targeted Recovery**



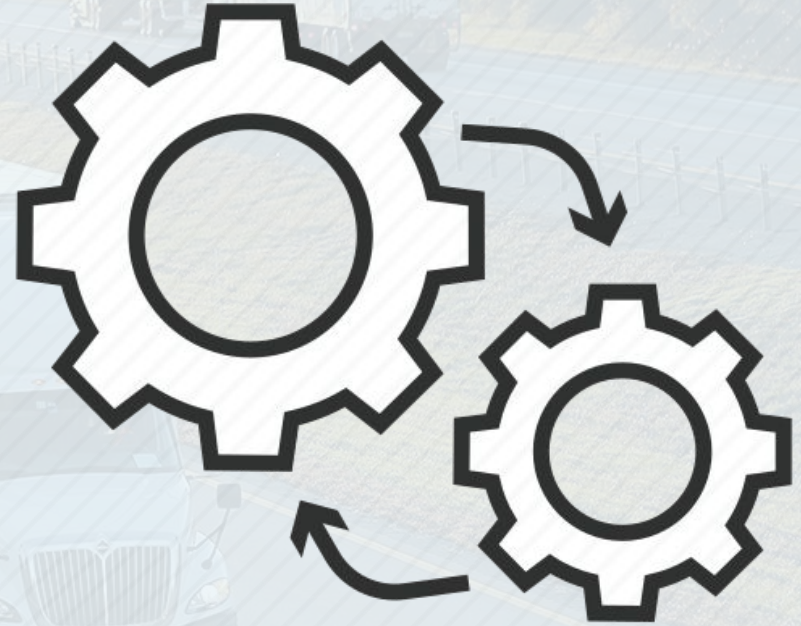


**Is the merchandise campaign  
more or less effective for  
certain products? Would you  
recommend any changes to the  
structure of the promotion?**



# Methodology

- Analyzed the Driver Monthly Campaigns and Driver Monthly Product Sales datasets to assess the effectiveness of the Merchandise Campaign on products
- Totaled Product Sales for Merchandise Campaign Month and Prior Month periods



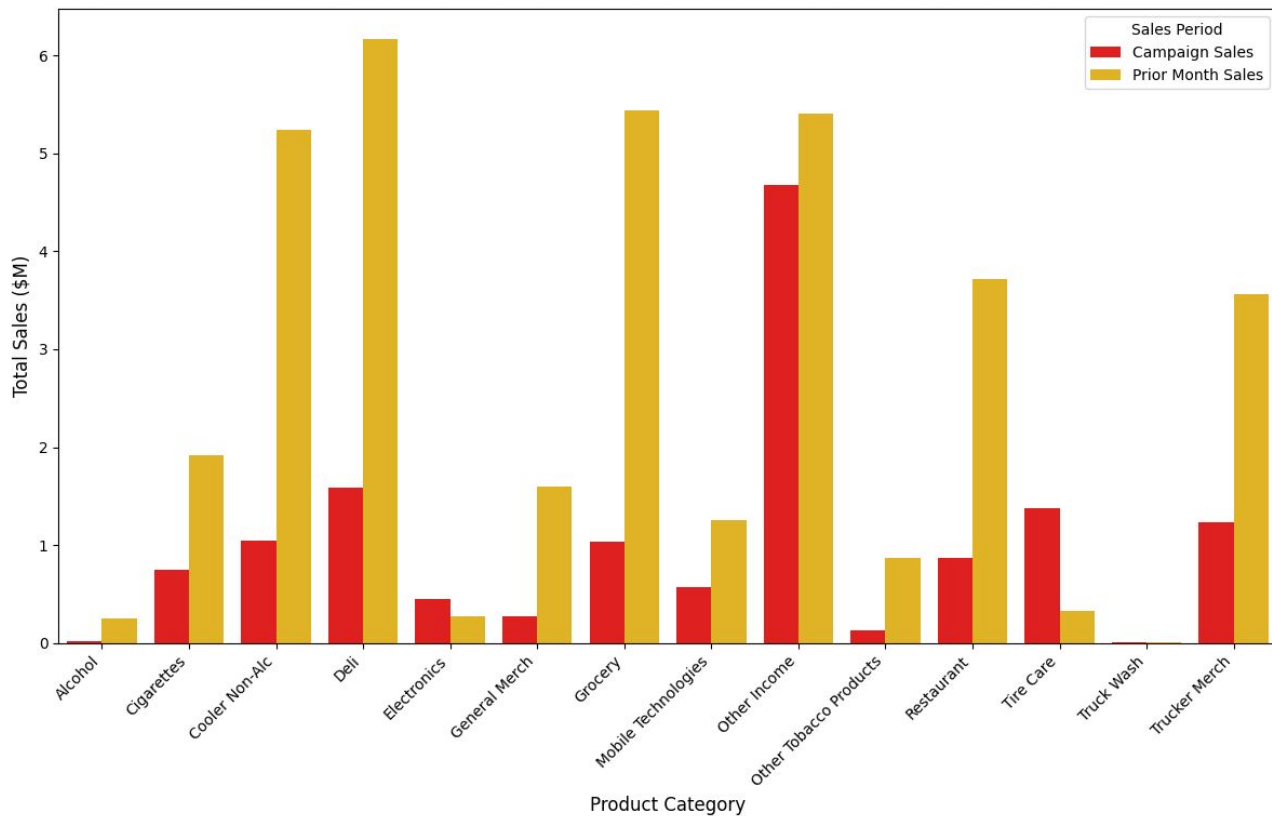


# Merch Campaign Analysis

## Merch Campaign's Effect on Products

### Findings

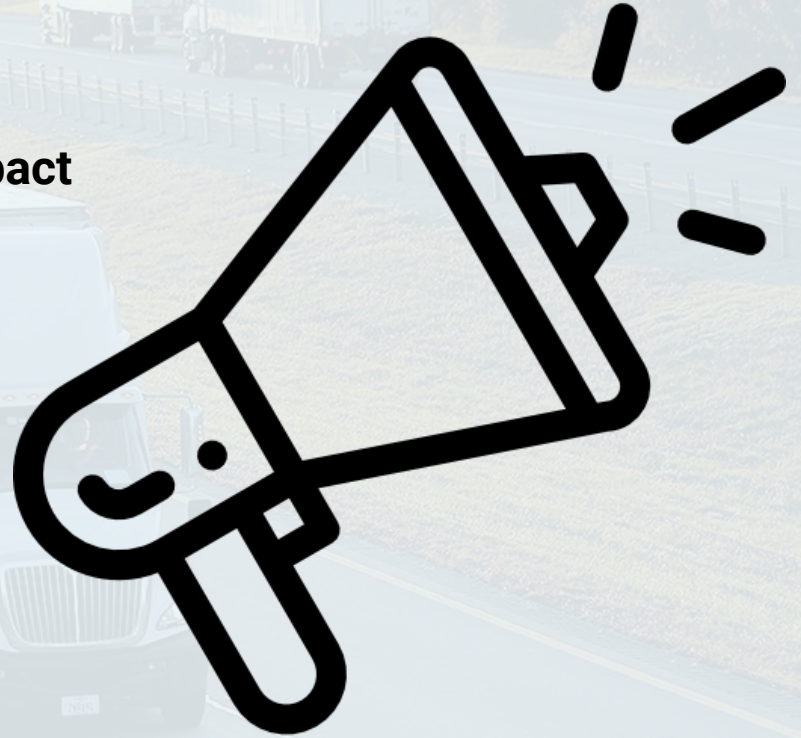
- **Deli products**, consistently showing strong sales
- **Other Income** products also perform well across campaigns.
- **Grocery** has the third-highest prior month sales



# Recommendations

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- **Focus on High Performing Categories:** Deli, Other Income, Grocery
- **Reduce or restructure incentives on Low Impact Categories:** Alcohol, Electronics, Truck Wash





**How can analyzing historical campaign data help develop a more effective strategy to boost customer sales?**

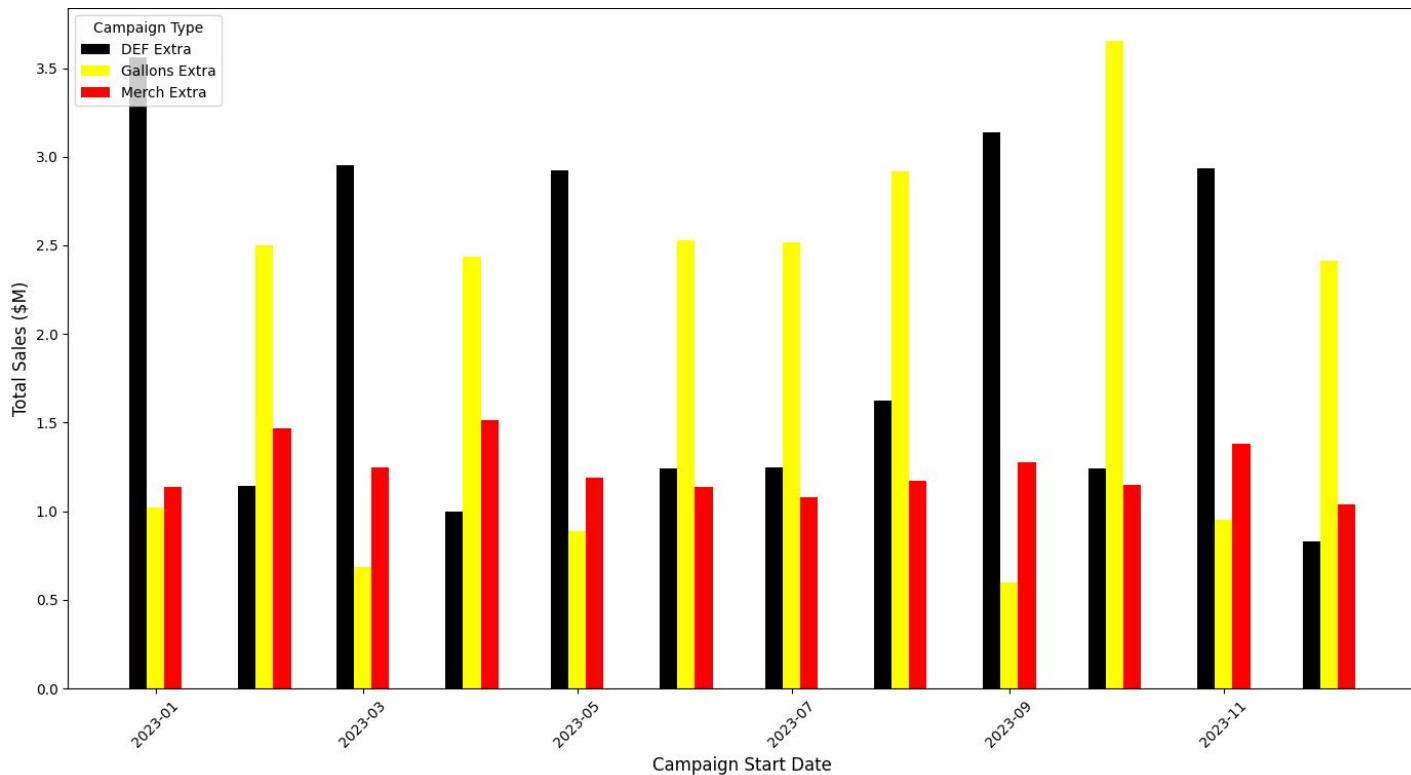


# Historical Campaign Data Analysis

## Findings

- **Gallons** brought in more sales compared to **DEF**
- **Merch** outperforms secondary priority campaign

## 2023 Campaign Sales Data

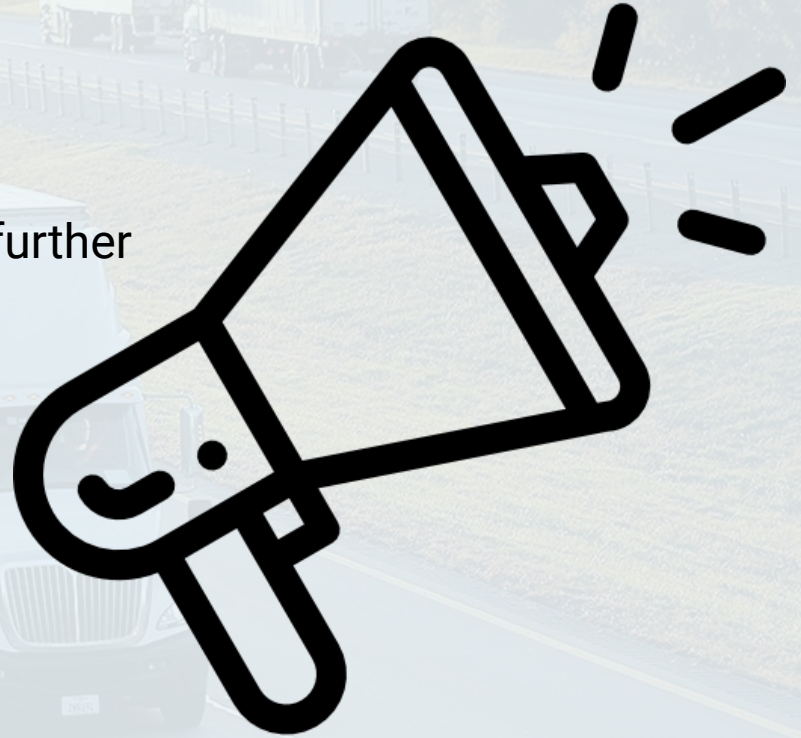




# Recommendations

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- Experiment with different combinations to maximize results
- Bundling fuel and merchandise discounts to further boosts sales

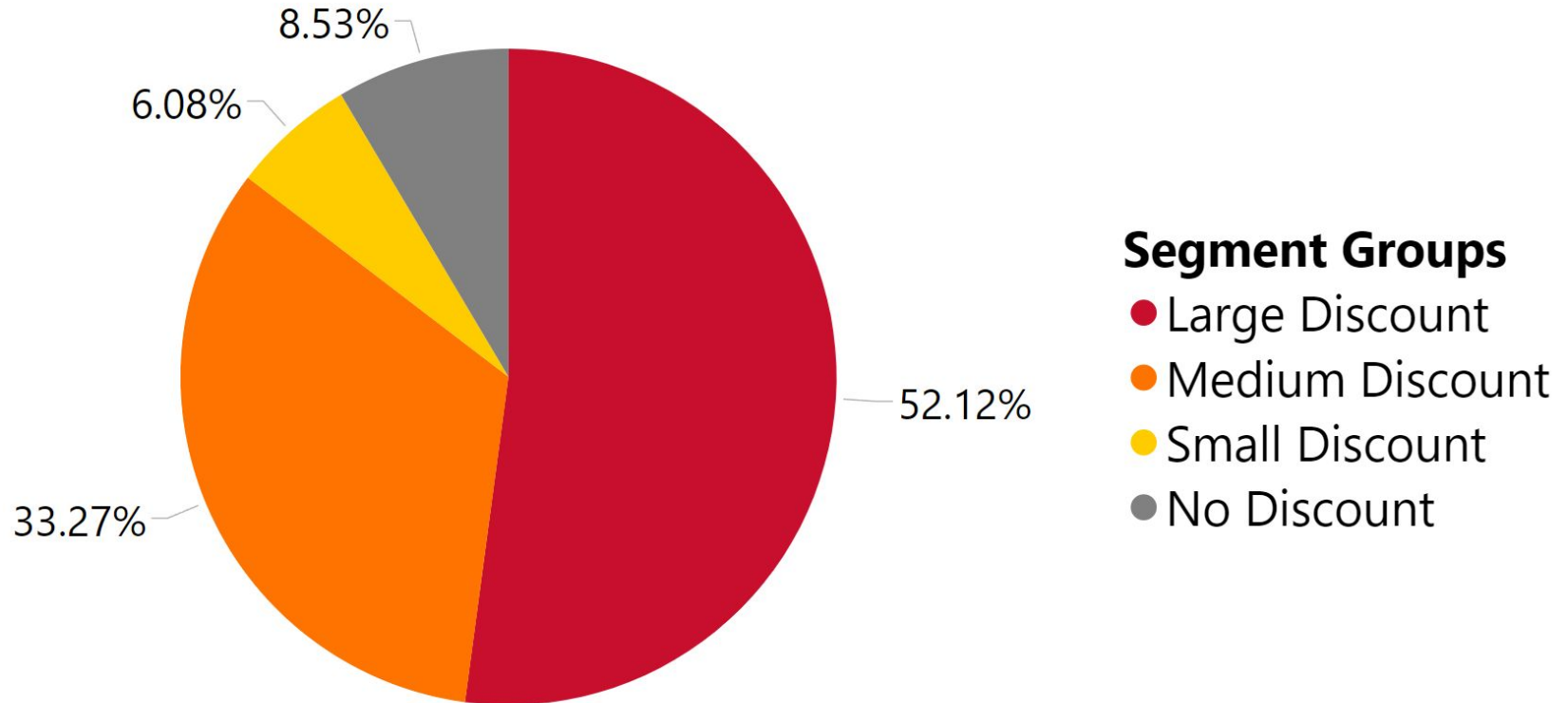




# Customer Segment Groups



# Driver Distribution Across Segment Groups





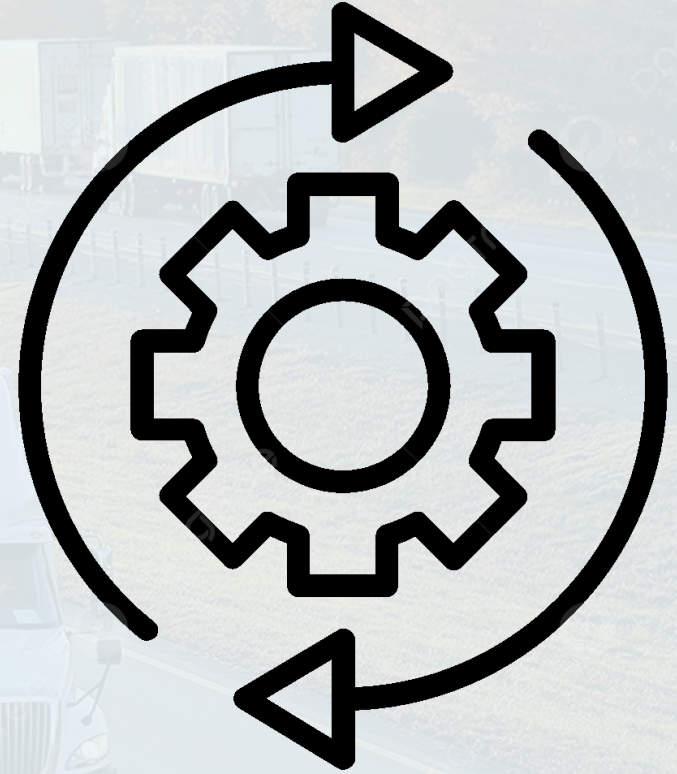
**How do a customer's total sales  
and monthly product sales  
contribute to understanding  
individual customers, and what  
insights can be gained for each  
segment group?**





# Methodology

- Joined Driver Lookup and Driver Monthly Product Sales Datasets
- Grouped the drivers by their segment group

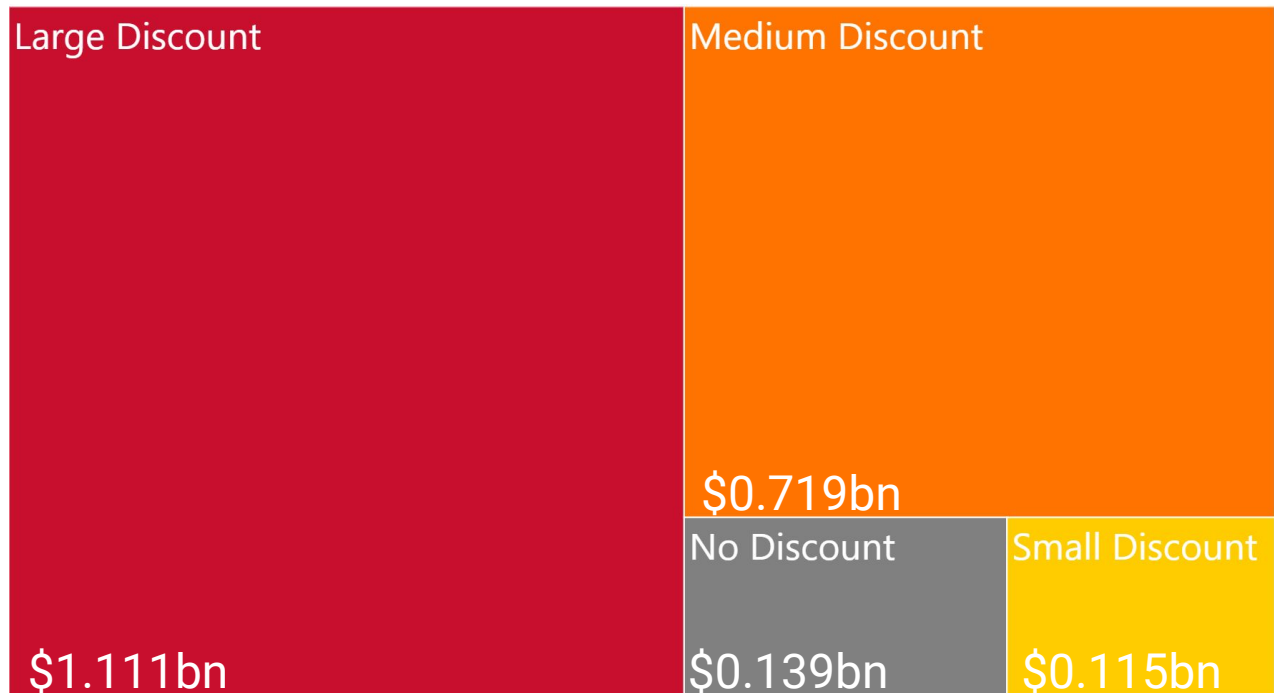


# Sales Segmentation Analysis

## Findings

- **Large Discount** group makes up **53%** total sales
- **Small Discount** makes up the least at **5.5%** of sales

## Sales Distribution by Segment

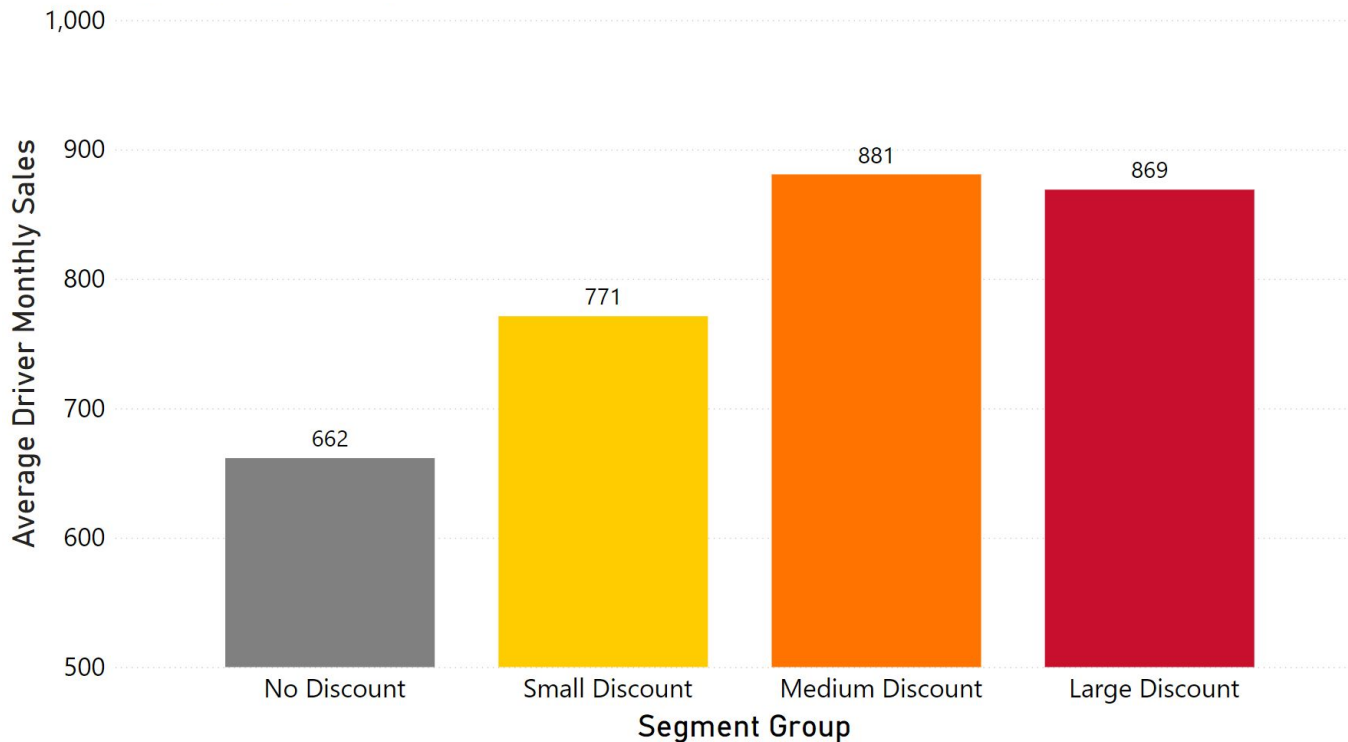


# Sales Segmentation Analysis

## Findings

- **Medium Discount** spends the most monthly with **\$880.75** on average
- Small Discount averages over **\$100 less** per month than both Medium Discount and Large Discount groups

## Average Driver Monthly Sales by Segment



# Recommendations

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- Offer targeted promotions to different segment groups to increase driver engagement among fleets
- Highlight benefits to no discount and small discount groups
- Promote additional services to large discount group





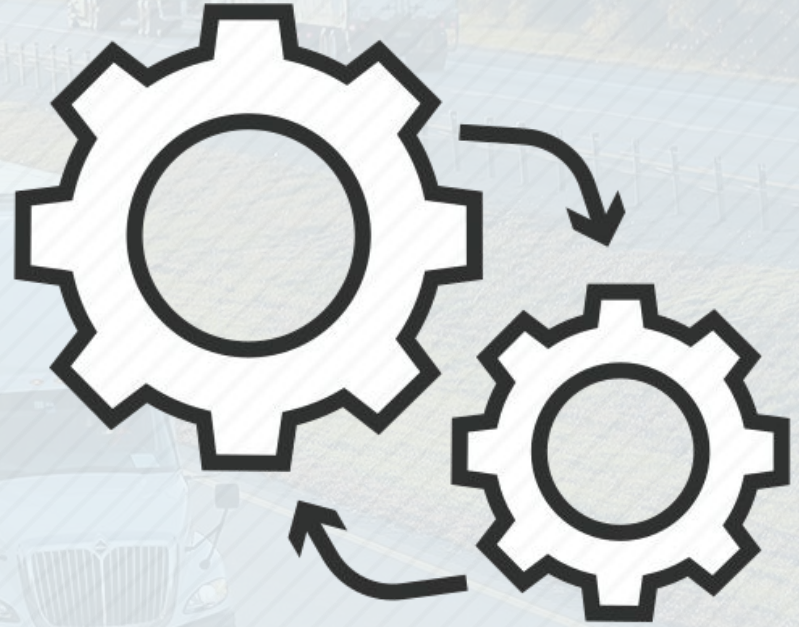


**Do different segment groups  
tend to visit stores in  
varying divisions, states,  
etc.?**

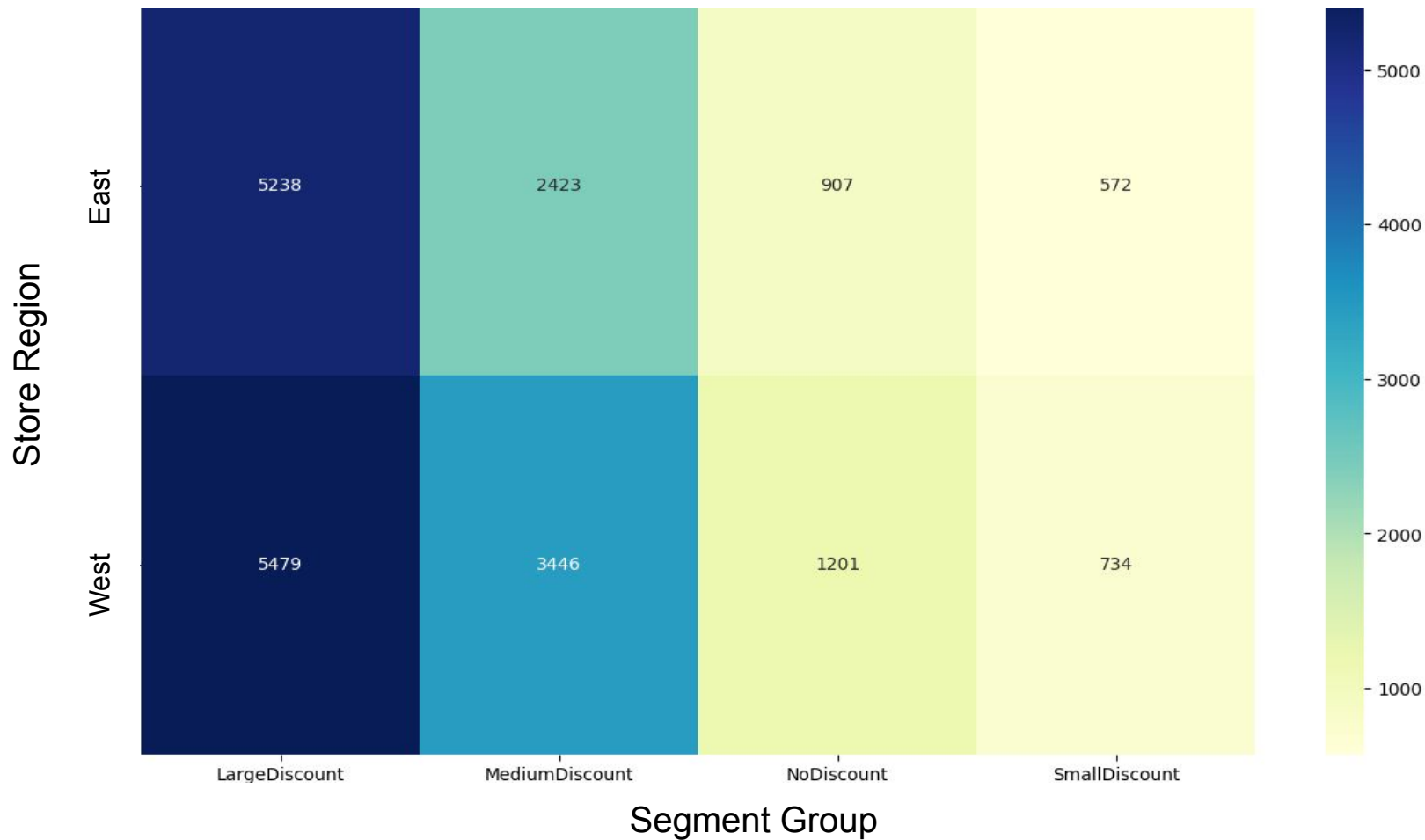


# Methodology

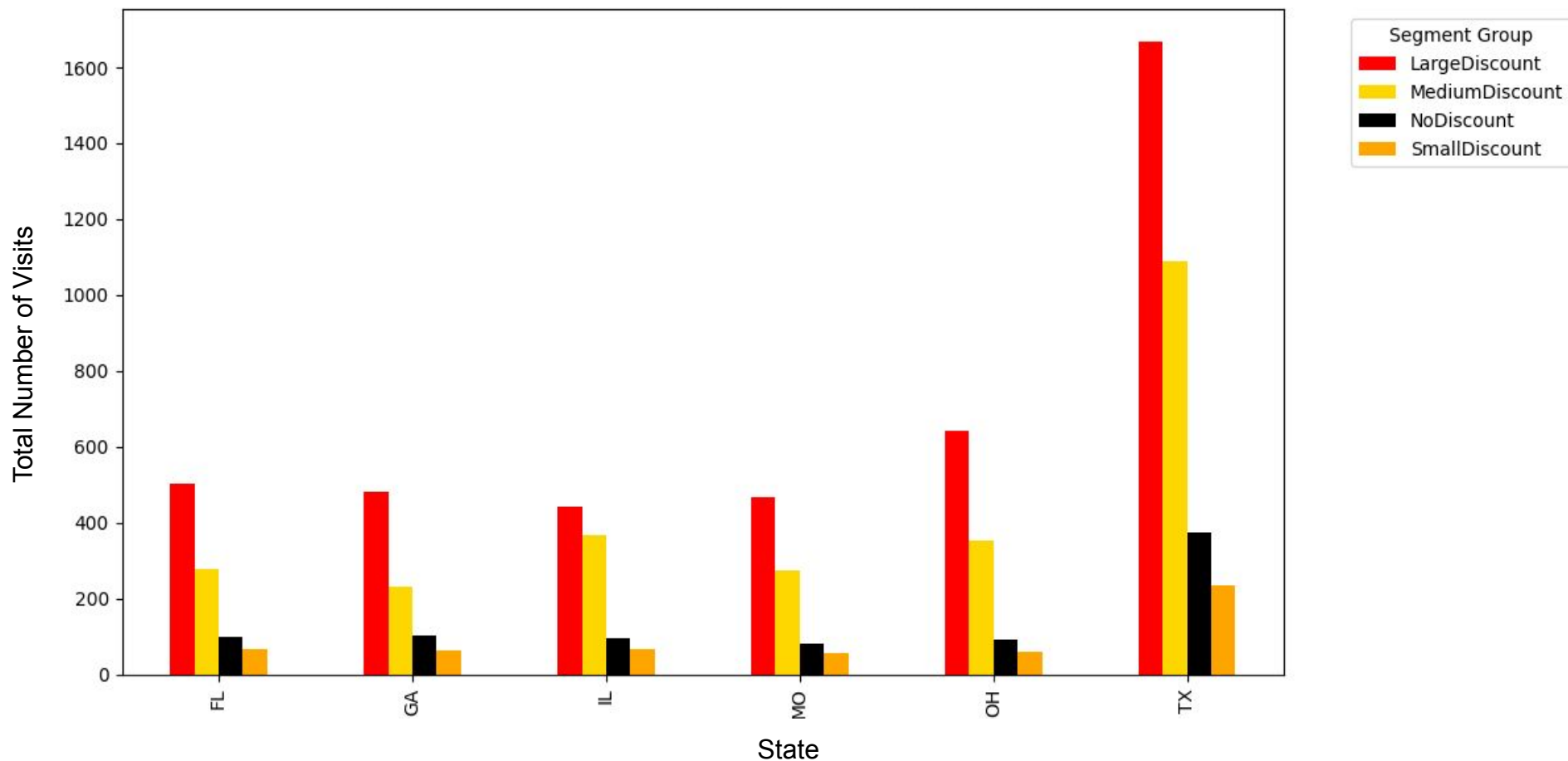
- Analyzed datasets for missing values
- Calculated key metrics for each group, including:
  - Total visits by segment for each region
  - Total visits for the top states of each segment



# HeatMap of Total Visits by Segment Group and Store Region



# Number of Visits for the Top 6 States of Each Segment





# Recommendations

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- Target marketing campaigns to high visitation states
- Design campaigns tailored to each region
- Leverage App Insights for Real-Time Promotions





**How do join and achieve  
rates vary by segment?  
What drives this behavior?**

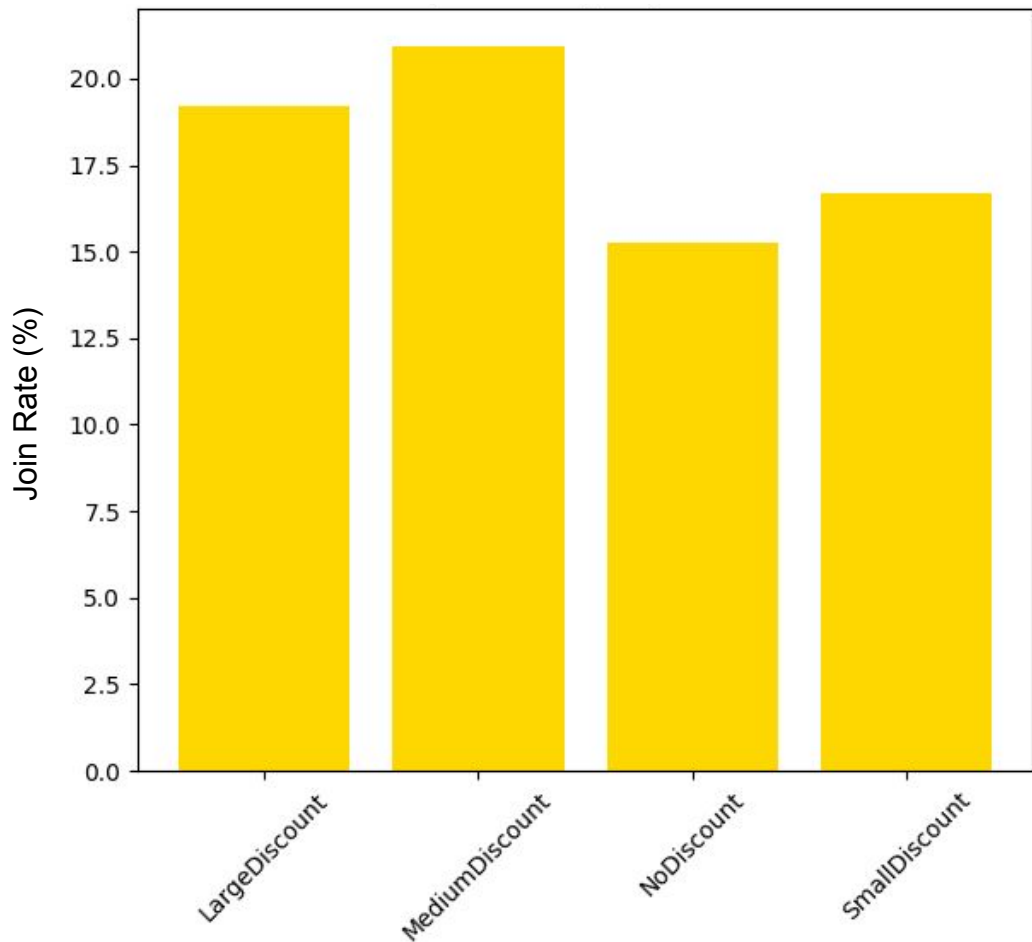


# Join Rate Analysis

## Findings

- **Medium Discount** has the highest join rate at **20.31%**
- **No Discount** has the lowest join rate at **14.81%**
- Larger Discounts might attract more drivers, but Medium Discount strike a balance between value and attainability.

## Join Rate by Segment

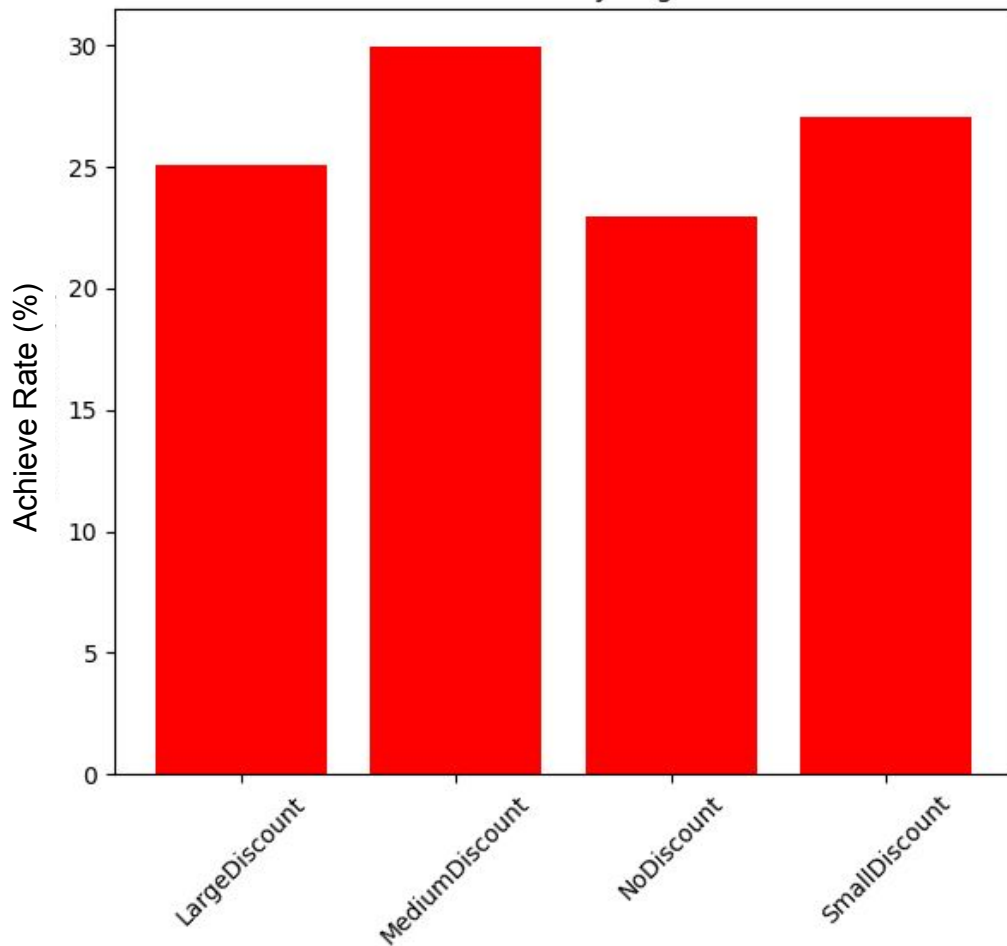


# Achieve Rate Analysis

## Findings

- **Medium Discount** has the highest achieve rate at **29.99%**
- **Large Discount** has the lowest achieve rate of discount segments at **22.99%**

## Achieve Rate by Segment

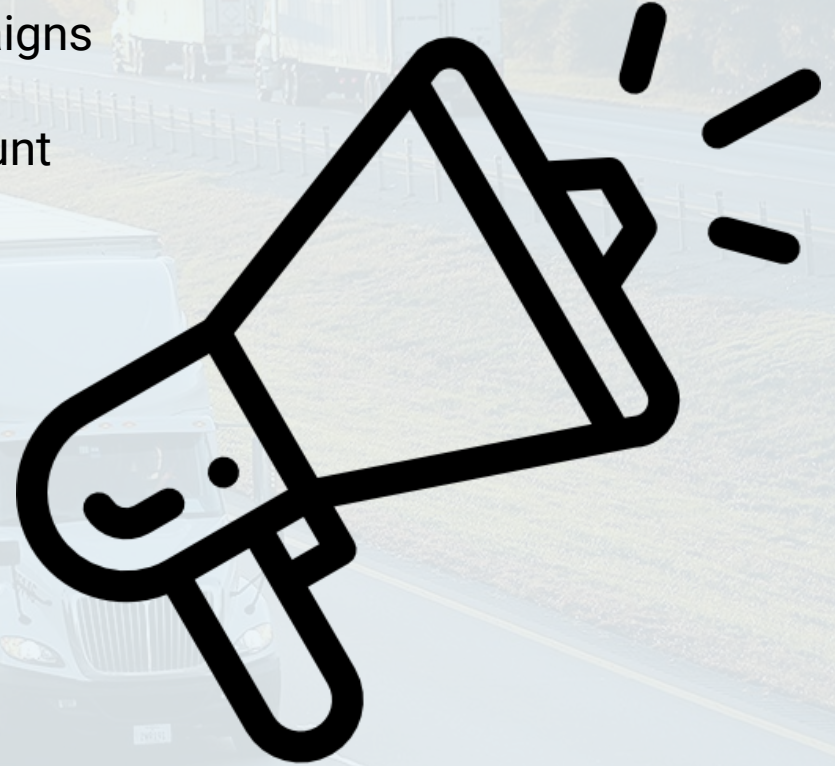




# Recommendations

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- Tailor Campaign Goals to Segment Needs
- Double down on Medium Discount campaigns
- Experiment with variations in small discount campaigns, as they also perform well





# Customer Trends





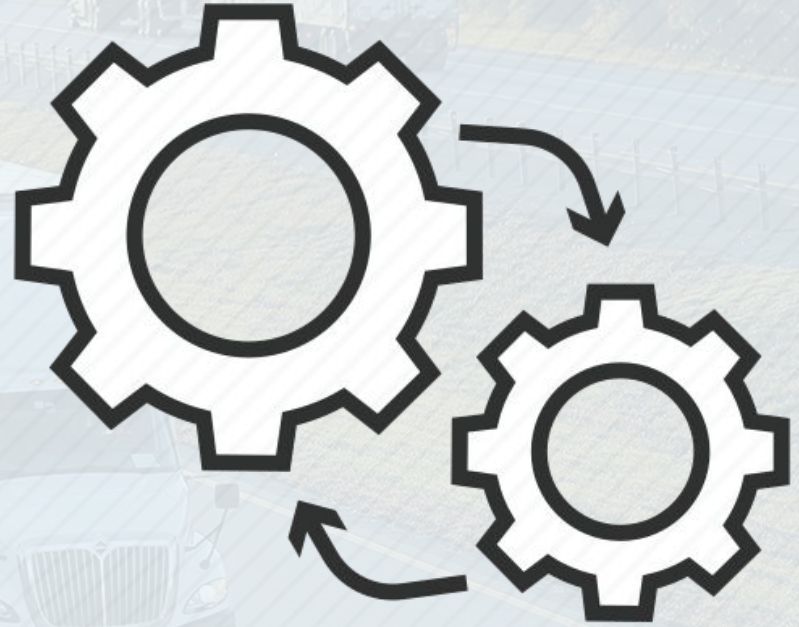
**Which campaign send channel  
(email, push, SMS) have the  
greatest impact on customer  
campaign joins and achievements,  
and how does the effectiveness of  
these channels differ across various  
segment groups?**





# Methodology

- Analyzed the “Driver Monthly Campaigns” dataset for performance metrics.
- Calculated performance rates by channel and campaign
- Used bar charts to show join and achievement rates by channel and campaign success.



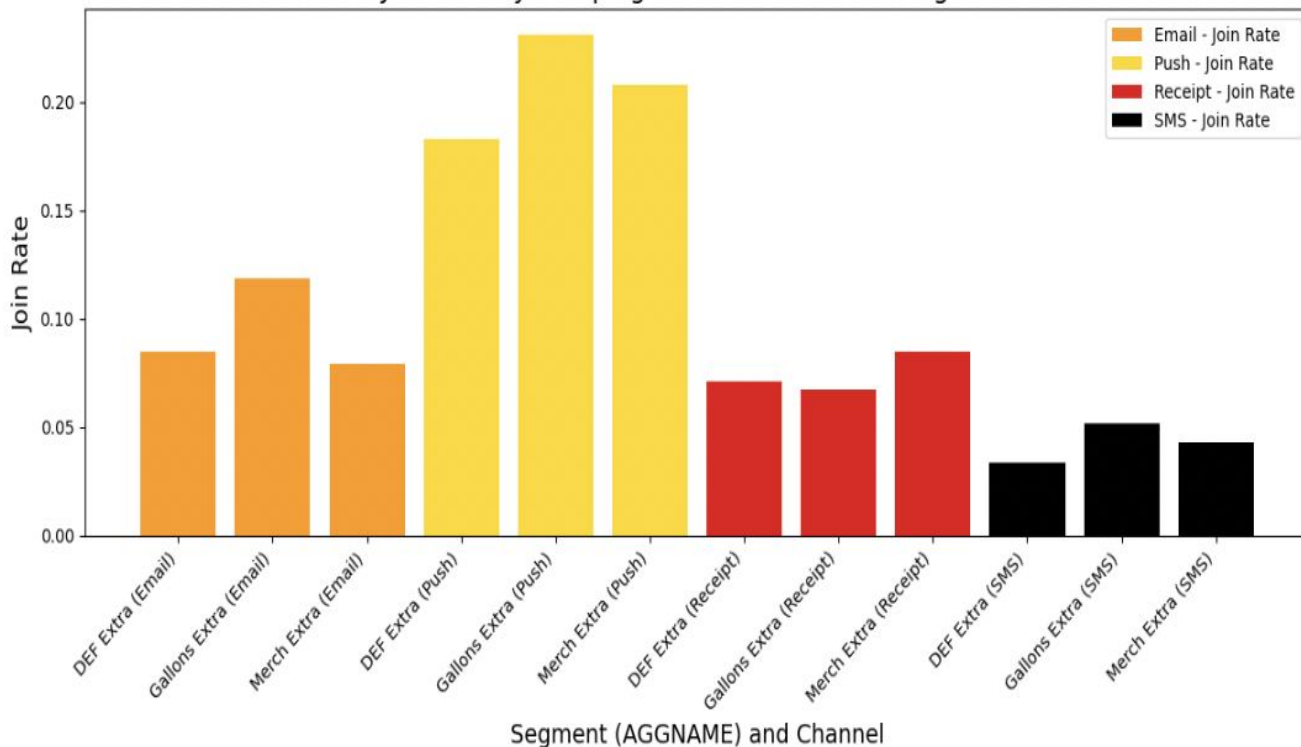


# Join Rate Analysis

## Findings

- These bar graphs indicates the percentage of drivers joining the campaign.
- Push channel has the highest join rate out of all campaigns

## Join Rate by Campaign & Channel

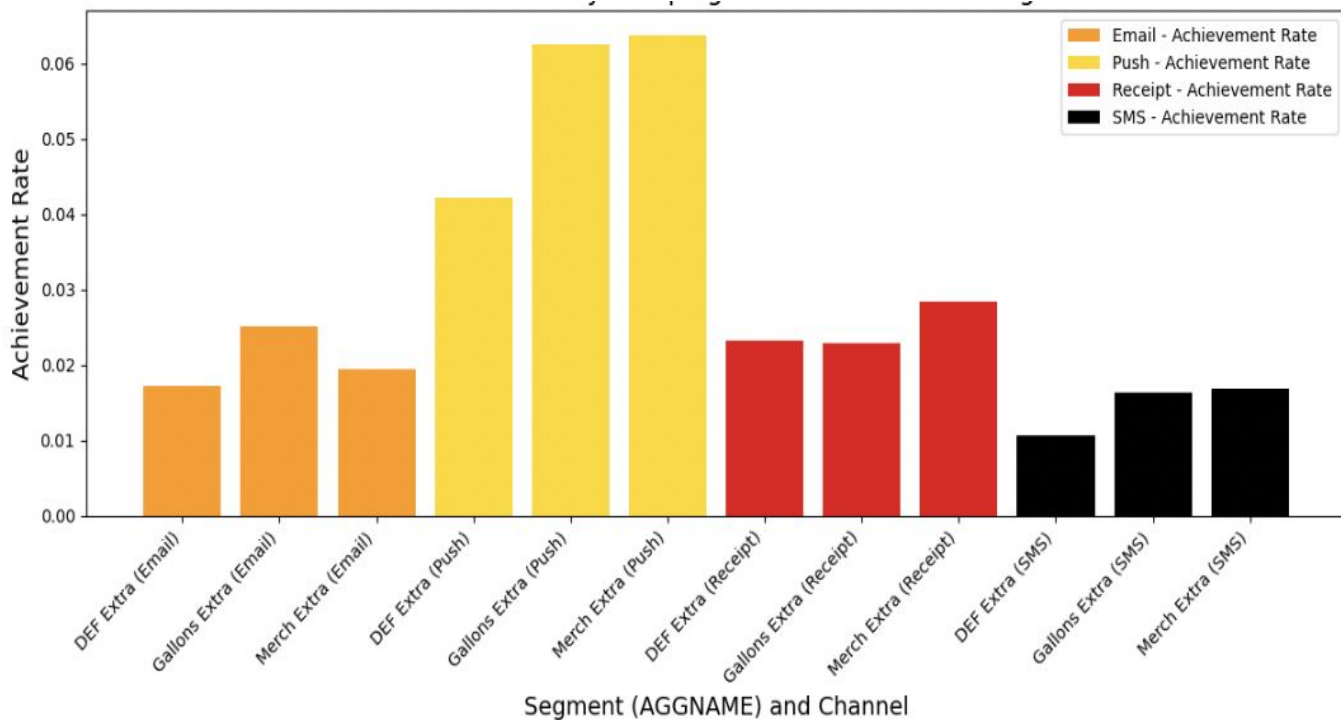


# Achieve Rate Analysis

## Findings

- These bar graphs indicate the percentage of drivers that reached their campaign goals after joining.
- Push channel is the highest in success of their achievement rate.

## Achievement Rate by Campaign & Channel



# Recommendations

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- **Improve Low-Performing Channels**
- **Consistent Messaging Across Channels**
- **Leverage Push Notifications**





**Does the driver's age  
influence the number of  
gallons they fuel in a  
month?**



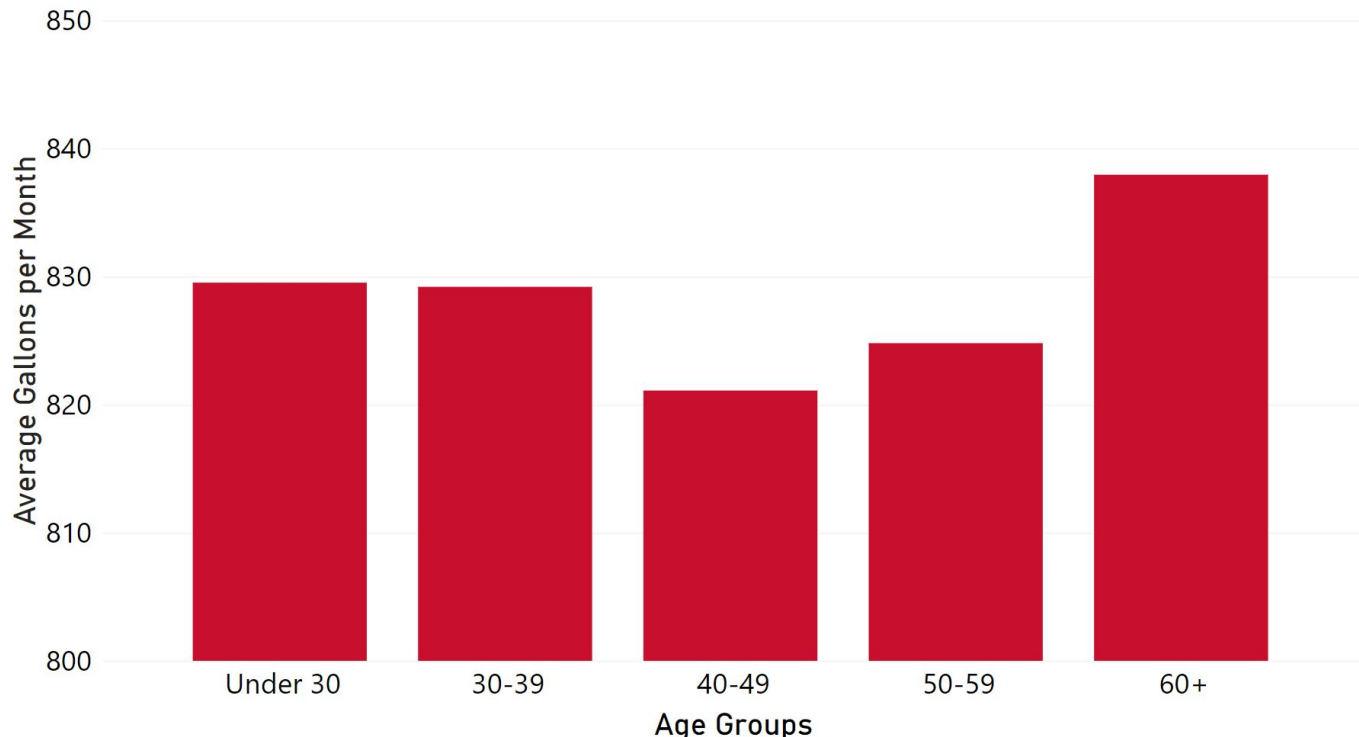


# Sales Segmentation Analysis

## Findings

- Small dip in 40's age group
- Age does not cause a dramatic change in fueling habits

## Average Monthly Gallons by Ages



# RFM Analysis

**Why RFM Analysis Matters:** Helps identify customer behaviors and trends, enabling the clustering of customers into meaningful segmentation groups for targeted marketing

## Recency, Frequency, and Monetary

- How recent was the drivers last visit?
  - Drivers last fuel or merch transaction month
- How frequent has the driver visited?
  - Drivers total visits
- How much has the driver spent with us?
  - Drivers total sales



# K-Means Cluster Analysis

A machine learning algorithm used to cluster based on patterns and shared attributes

0 - High-value, frequent

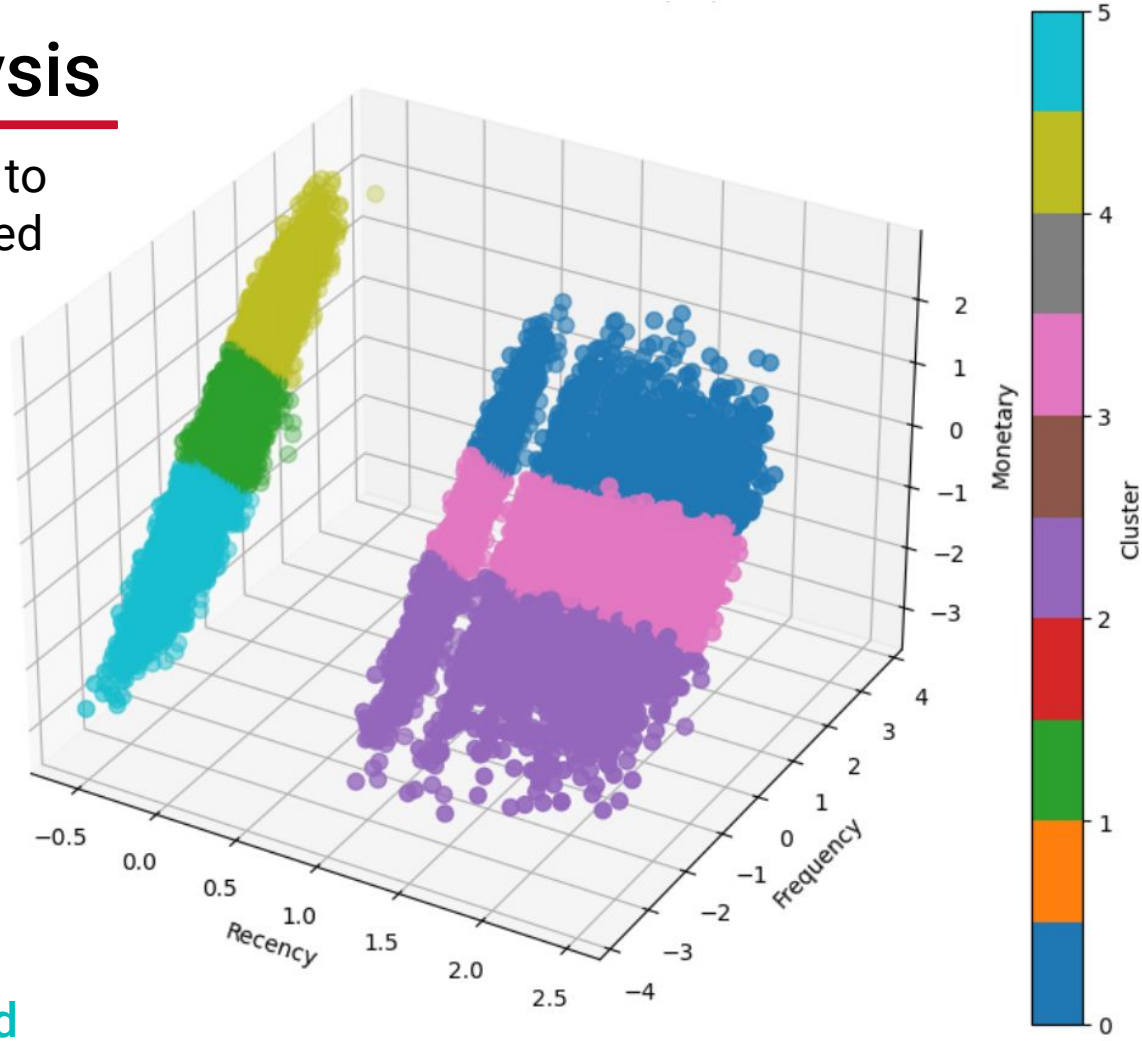
1 - Moderately engaged, mid-value

2 - Low-value, infrequent

3 - Consistent, mid-value

4 - Top-tier, loyal, high-value

5 - Low-value, newly engaged



# Recommendations

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- Offer “welcome” bonuses to encourage new activity
- Awareness campaigns
- Survey inactive customers to reevaluate campaigns and promotions





# Key Findings



DEF Extra campaign  
delivers the most net-benefit overall



Merch Extra campaign  
outperforms the second priority campaign



Medium Discount  
Drivers spend the most Monthly



Medium Discount  
Drivers engage the most in Campaigns



Push Channel  
has both the greatest join and  
achievement rate



Linear path  
among frequency and monetary value  
in clusters







# Q&A

