A CHANGING ENVIRONMENT FOR THE CHECKOUT LANE

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Our Project

Who is 84.51®?
- Data analysts and marketing company based in Cincinnati, Ohio
- Provide strategy and insights to The Kroger Company
  - The Kroger Company is a retail company also based in Cincinnati.

What are our project’s goals?
- Increase the efficiency of the grocery store checkout lane
  - Make a list of the products that will generate the most profit

What are the limitations of the project?
- Data provided to us only last products that were already in the checkout lane, so we don’t have the ability to add new products to the checkout lane
- No specific statistics for the area that products can take up

How will we accomplish our goal?
- Splitting into three teams to analyze the data based off of Household, Transactions, and Regional data sets
- Integrating our findings to take a deeper look into pricing, basket penetration, and household penetration
- See how three team statistics vary based off Household, Transactions, and Regional data sets

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References:

Our Data

• Evaluated store, product, household, and transaction datasets
• Store Dataset: Store ID, Zip Code, and Region
• Product Dataset: Product ID, Description, Size, Manufacturer, and what category it falls under
• Household Dataset: Loyalty, Household Demographics, How many people, their income bracket, and information about their main shopper.
• Transaction Database: Information about each transaction. Which products were bought, How many sets were bought. Which household and how much it was used.

• Datasets we created:
  - Unique pairings: Dataset to show each unique transaction since there was overlap sometimes in the Transactions Dataset
  - Basket Penetration: Dataset to show the basket penetration of every product at every store
  - Product Dataset: Show each product for all stores
  - Price Dataset: Shows the average price of every product since price can vary depending on the store
  - Top Households Dataset: Shows our households with the most activity

Personalizing to Stores vs Online:
We personalized on a store level. We would like to also have looked at personalization at an online level. But the data we were given was better suited for a store personalization.

How to Place Products on the Shelves:
- We ranked the products using “Norm Rank”
• Combined ranking: Constraints (size, ranking, space...)
• Figure 8: Start placing items where people look the most (eye tracking). Swap products
• Place top ranked products on the middle shelves
• Place lower ranked products on the corner/edges
• Place drinks that are popular with kids near the bottom shelf
• Don’t know who is walking through the checkout lane when a purchase is made

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