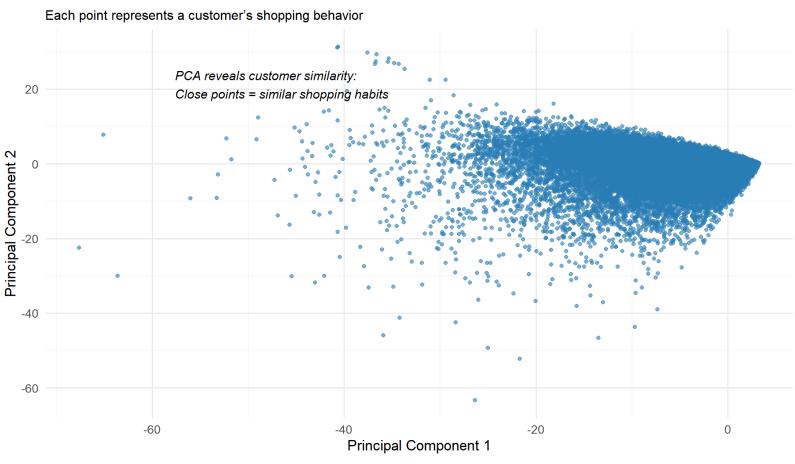
### Story6\_Data608

### **Defining Business Question**

This assignment involves using dimensionality reduction, clustering, and other tools to tell a story about the types of customers at Instacart.

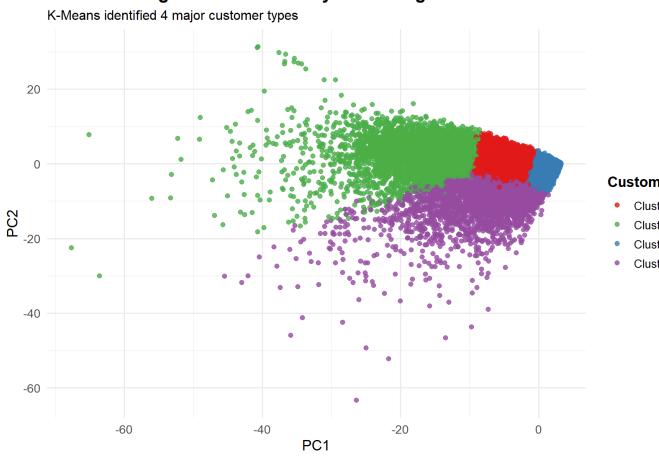
## Reducing Customer Dimensions to Reveal Behavior Patterns

#### **Customer Behavior Patterns via PCA**



## Clustering Users Based on Shopping Behavior

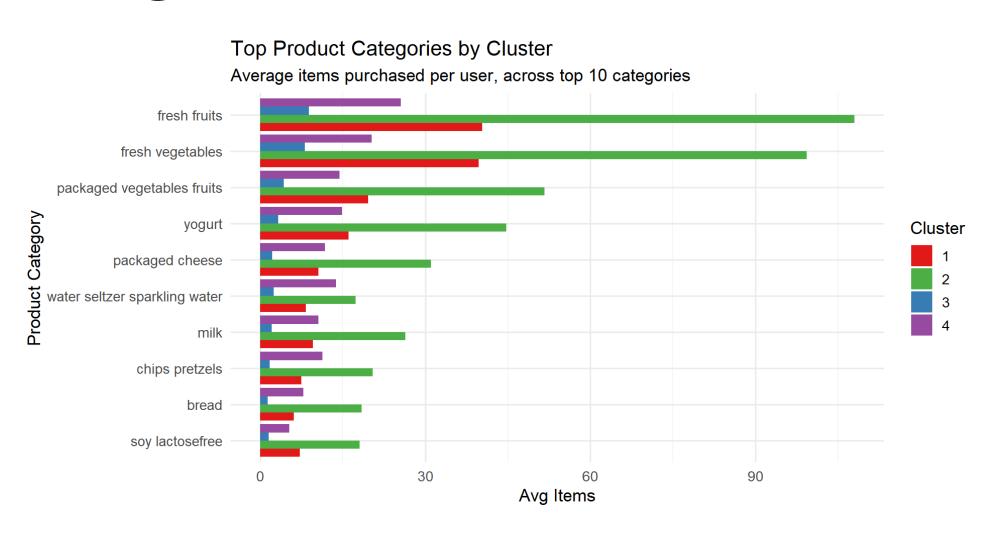
#### **Customer Segments Identified by Clustering**



#### **Customer Cluster**

- Cluster 1: Mixed Shoppers
- Cluster 2: Health-Focused
- Cluster 3: Snack/Convenience
- Cluster 4: Niche/Low Activity

# What Each Cluster Buys (Top Product Categories)



### **Shopping Behavior Over Weekdays** (Dynamic Day Columns)

#### **Weekly Shopping Pattern by Cluster**

Shopping habits vary in timing across customer types

