

Predicting Grocery Customer Behaviors and Market Basket Analysis

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Agenda

1. Objective
2. Results
3. Analysis and Methodology
4. Modeling
5. Recommendations
6. Future Considerations

Objective

- Stakeholder: GroceriesToGo, a grocery store with online services
- Business Problem: Predicting whether a customer will reorder a product
- This allows the firm to make business informed decisions and develop data-driven strategies

BLUF

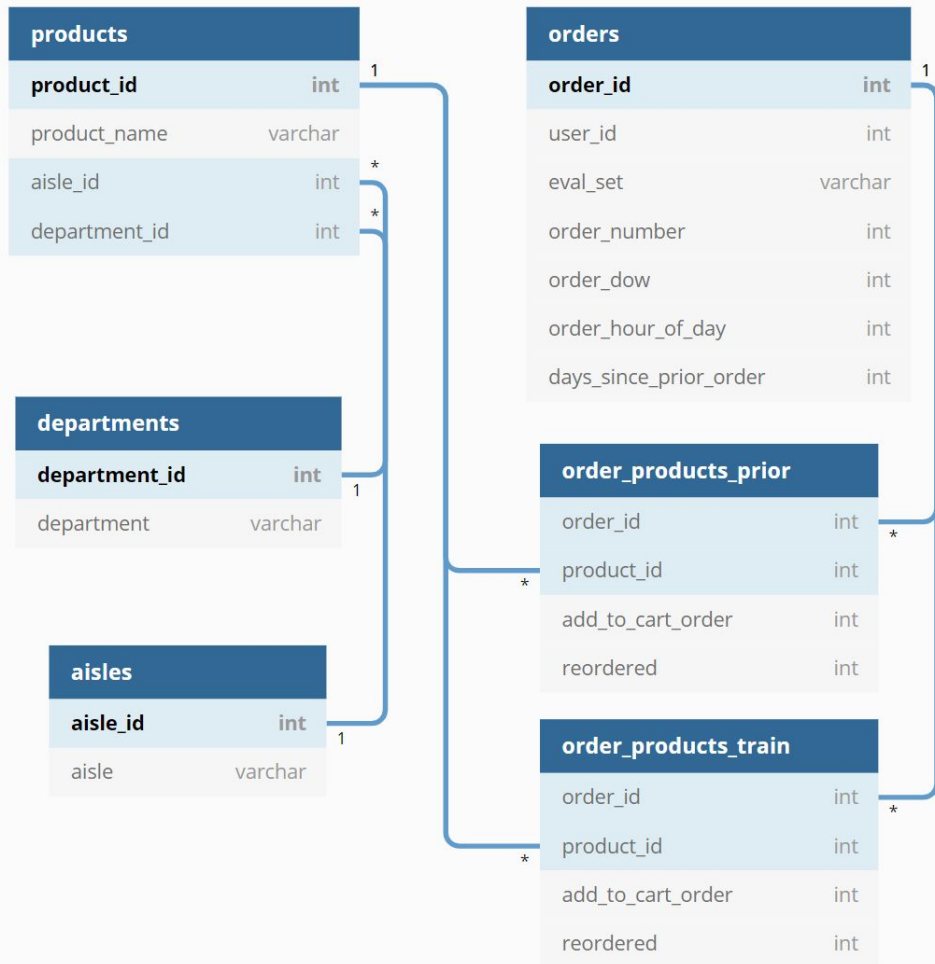
- Our best model predicted 9 out of 10 reordering customers accurately

Data Utilized

- 2017 Instacart Open Sourced
- 206,209 Customers
- 3,421,083 Unique Orders
- 33,819,106 Total Products Ordered

Limitations

- User Data is anonymized
 - No demographic Data (gender, age, income)
 - Products does not include the Brand Names



Exploratory Data Analysis

Insert EDA visuals (make titles descriptive, graph labels are big, etc)

Insert EDA Visuals

Insert EDA Visuals

Modeling Process

Most Important Features

Customer Total Orders

Product Total Orders

Customer Cart Size

Our Model

Customer Reorders
Product

Customer DOES NOT
Reorder Product

Our Best Model

- Model identified 9 out of 10 reordering customers accurately

Classifier	Accuracy
Random Forest	90.24%
KNeighbors	88.67%
Decision Tree	84.62%

Recommendations

- Target the reordering customers with coupons and ads
- Create a loyalty or points program to retain customers
- Use the models to know which products are most often purchased to keep supply stocked

Future Insights

- Utilizing more advanced Market Basket Analysis to give insights which products are often bought together
 - Coupons and Specials to more incentivize buying items together
- Clustering techniques to group customers on their buying preferences
- Creating a Recommendation App to suggest to customer what others have bought to a specific product or similar shopping order

Thanks! Questions?

Contact

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