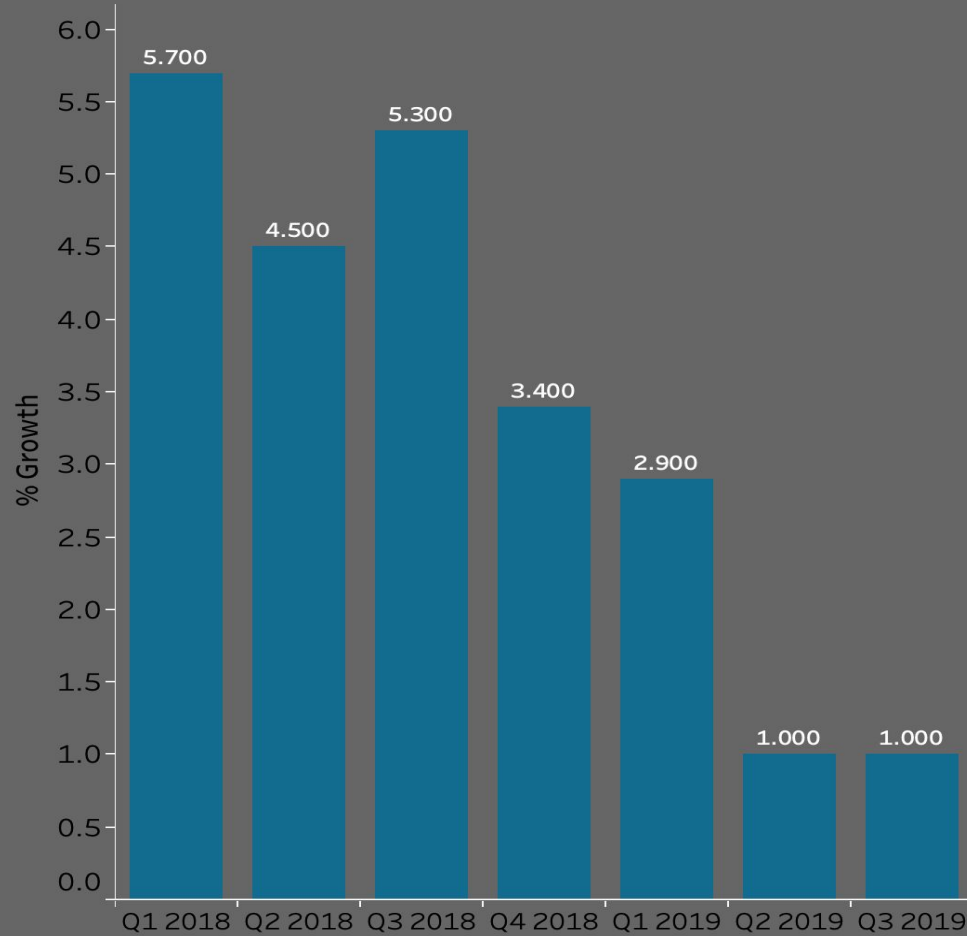# Marketing Strategy Analysis

1%

Quarterly Online Revenue Growth

Objectives

1. Gain insights from past marketing campaigns to develop targeted/efficient future campaigns
   a. Predict and influence customer behavior
   b. Improve capture rate (recall) of campaigns
2. Retargeting campaigns
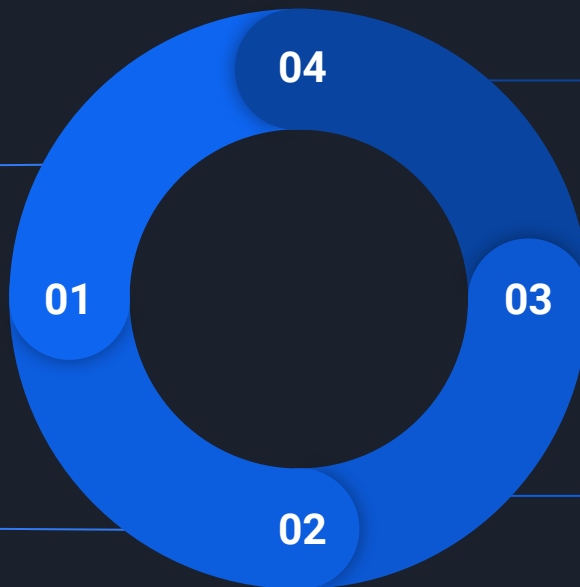3. End goal: Increase revenue
   a. Emphasis on website orders

Approach

Train Multiple Classification Models

Data from previous campaigns. KNN, Naive Bayes, SVC, Decision Tree, Random Forest, Logistic Regression, XGBoost

Final EDA + Recommendations

Deeper dive into top features and groups. Make recommendations.

01

04

03

02

Fine tune Top Three

Fine tune hyperparameters for: **Logistic Regression, Random Forest, XGBoost**
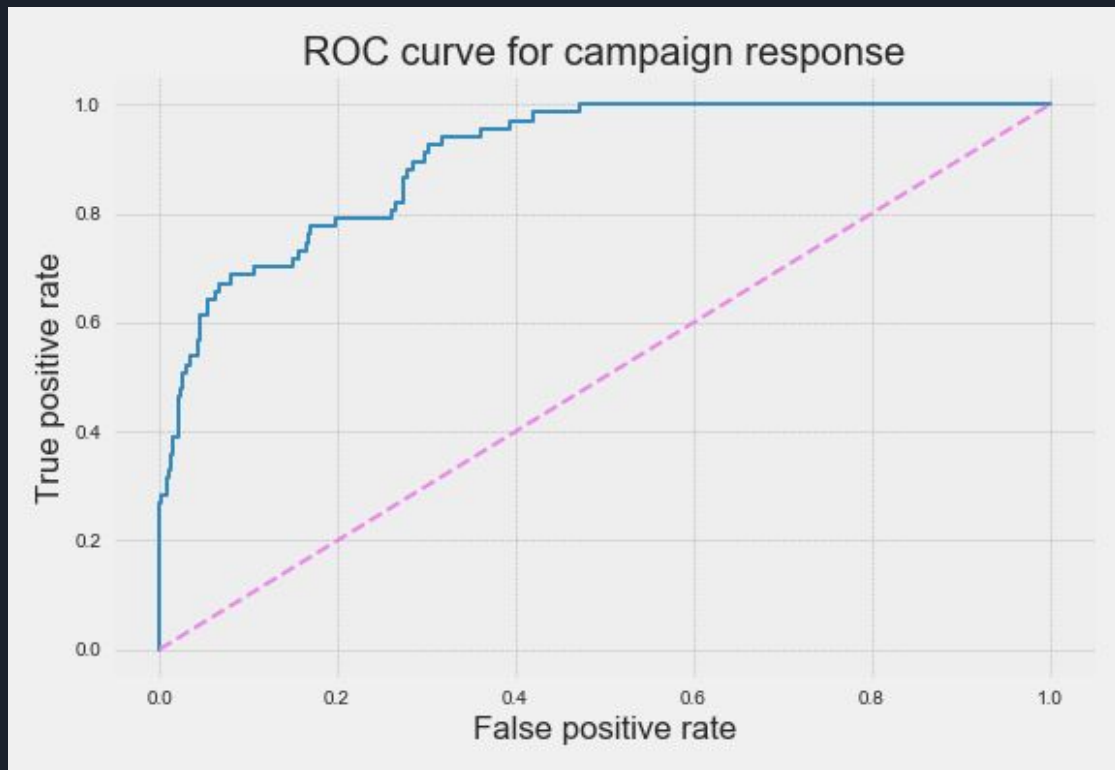
Top Model: XGBoost

Interpret results and feature importance
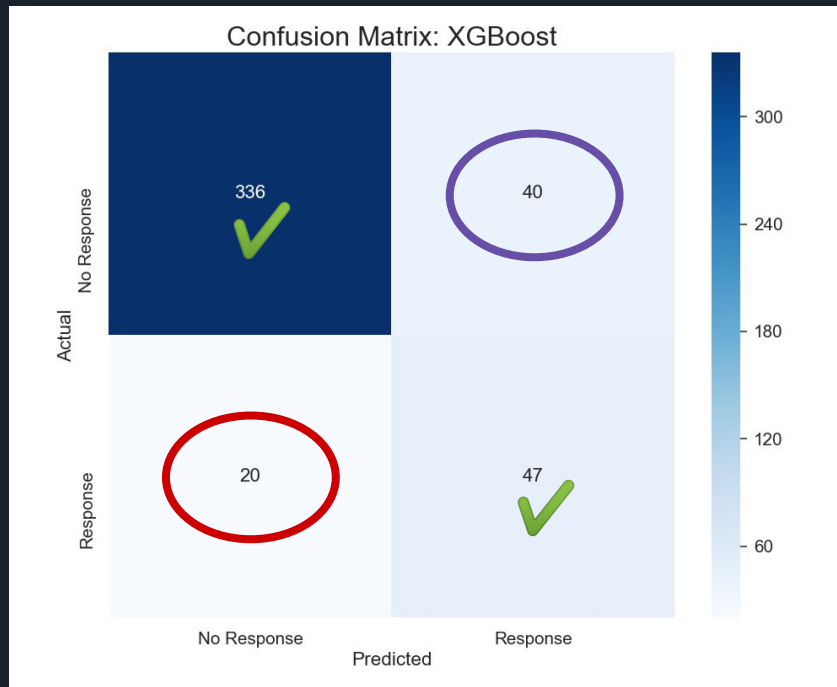
XGBoost Model Performance
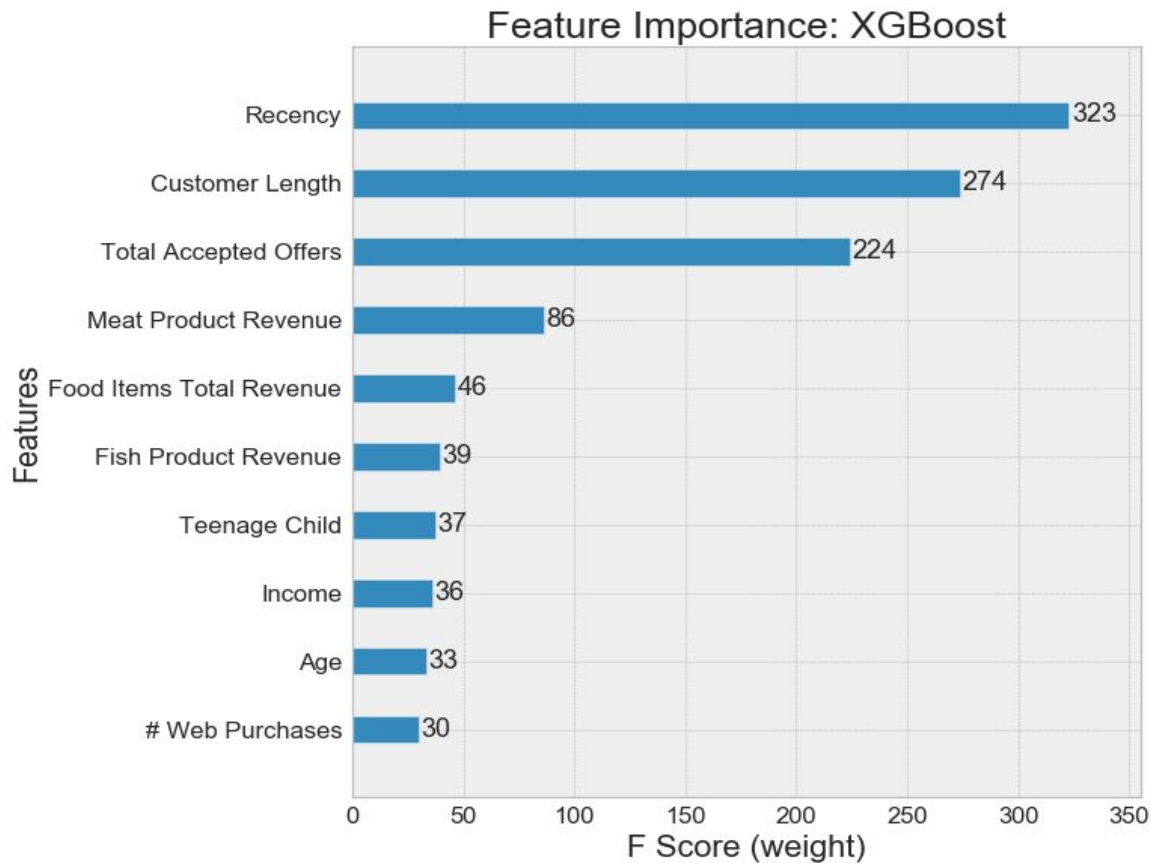
AUC
Score:
90.4%

XGBoost Model Performance

Marketing strategy: Cost per Acquisition, each acquisition ~ 27$

- False Positives
  - From marketing standpoint doesn't matter
- False Negatives
  - May affect marketing budget if many unpredicted advertisement payments
  - May lead to being understocked

Confusion Matrix: XGBoost

Feature Importance:

Top 10/29 variables the model deemed most important in classifying Responders vs. Non-Responders

Feature Importance: XGBoost

Feature	F Score
Recency	323
Customer Length	274
Total Accepted Offers	224
Meat Product Revenue	86
Food Items Total Revenue	46
Fish Product Revenue	39
Teenage Child	37
Income	36
Age	33
# Web Purchases	30

F Score (weight)

Customers who respond to campaigns have high lifetime value

Revenue Breakdown
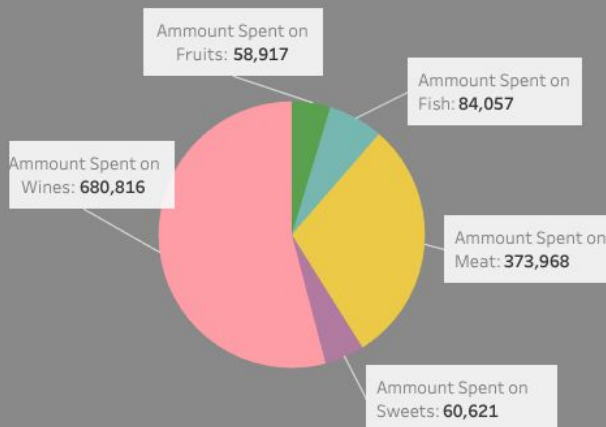
Ammount Spent on Fruits: **58,917**

Ammount Spent on Fish: **84,057**

Ammount Spent on Wines: **680,816**

Ammount Spent on Meat: **373,968**

Ammount Spent on Sweets: **60,621**

Meat Revenue by Group

Response
1 — 294.4
0 — 144.6

100 150 200 250 300

Avg. Ammount Spent on Meat

Wine Revenue by Group

Response
1 — 502.7
0 — 269.1

150 200 250 300 350 400 450 500 550

Avg. Ammount Spent on Wines

Web Purchases by Group

Response
1 — 5.072
0 — 3.912

0 1 2 3 4 5

Avg. Number of Web Purchases

Fish Revenue by Group

Response
1 — 52.05
0 — 34.98

0 10 20 30 40 50 60

Avg. Ammount Spent on Fish

Website Visits per Month by Group

Response
1 — 5.29341
0 — 5.32057

0 1 2 3 4 5 6

Avg. Number of Web Visits per Month

Total Revenue by Group

Response
1
0

0 100 200 300 400 500 600 700 800 900

Avg. Total Revenue Food
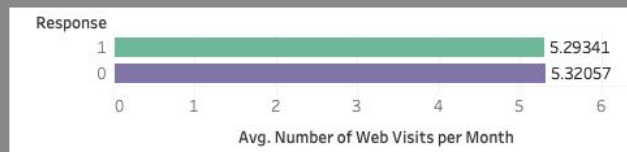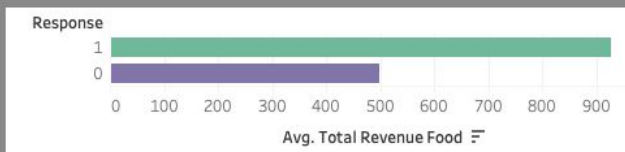
Recommendations

Using the model we will be able to target customers with high lifetime value via:

- Retargeting and nurture of existing customers
    - Bring back to website for increased revenue and retention
    - Cheaper, easier compared to new acquisition
- Retargeting of new customers
    - Only 2 % of people who see an ad the first time convert

Thank you

- Alen Tersakyan (Analytical Marketing)

Summary

- **Problem:** Current state of website revenue
- **Solution:** Classification models to predict response to campaigns
- **Exploration:** Exploratory analysis on key metrics between groups
- **Recommendations:** Retargeting to increase revenue and improve marketing strategy

Retargeting

Potential Customer

They visit your site....

But leave without checking out!

Your potential customers turn into happy customers!

Your ad recaptures their interest, and brings them back!

Later they surf the web