Project Summary

### DSO 545 – Final Presentation

TEAM

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PROBLEM CONTEXT

After each one-year, members who join the store have their membership expire. Members must renew their membership to continue to shop at The store. If they do not renew, they are considered as “attrited” (aka churned). Currently the renewal rate for first year (FY) members (members who are in their first year of membership) is around 55%, as compared to all members which is around 85%.

GOAL

Determine what drives a first-year member to renew. Conduct and EDA (exploratory data analysis) to understand What does an "ideal" FY member look like? And What can we do to retain more FY members and prevent churn?

PROJECT TIMELINE

* Data Cleaning: November 8 - November 15
* EDA: November 15 - November 22
* Story Forming: November 22 – November 29

EDA – KEY PROCESS & INITIAL FINDINGS

* To process the data, we used PySpark, which uses Python and processes the data in Spark
* Member – month🡪 Number of Visits and products purchased (Objective: use it to create average basket size)
* Member – Day (Weekend vs Weekday) – Level 🡪 Visits and products purchased (Objective: use it to understand whether there is a pattern in there)
* Member – Favorite store – Top The store store that each member visits (use it to find the region/market/name of the store by using a simple mapping)
* Based on Member, POS, Product Attribute data sets we generate following KPIs for The store to track FY member’s shopping behavior: Basket Size, Inter Purchase Interval, Sales per Visit, Visit Frequency, Items per Visit, Time of Day
* 80% of The store customers are savings members
* 19% of The store customers are on auto-renewal
* ~77% of the total sales came from renewed customers
* ~68% of the sales transactions were done using cards
* Top 5 clubs accounted for ~11% of The store sales
* 77% of customers who visit The store on their Date to Renew tend to renew

INSIGHTS

* FY renewed members basically live 5.92 miles away from the closet store, 49 years old, married with 0-2 children, earn $50K - $74K
* Miles to club, Member Age, Income, Household Size, Plus Membership Status are the top 5 most important attributes related to FY member renew decision
* Renewed customers tend to shop more than churned customers, applies to both Business and Savings account
* FY renewed members had 19 annual visits, less than 3 weeks of interpurchase frequency, 9 of 12 months in a year visited the store, averagely contributed $2800 to The store yearly revenue, always use credit/debit card to pay

IDEAL FY RENEWING MEMBER

1. Profile – Age:35; Marital Status: Married; Family Size: 2 to 3
2. Interaction – Live less than 5 miles from the closet store; visit store twice a month; the intervisit is less than 20 days
3. Transaction – Contribute $250 per month to store; Basket size was 10-12 items; Use credit/debit card to pay

RECOMMENDATIONS

* Proactively Target: Observe sales dip post 3 or 4 months from membership sign up date. Track irregularities in visits/intervisits across months
* Early Reminders: Send multiple reminders during the last quarter of membership. Use different channels to send reminders
* Evangelize Plus: Offer a trial period of plus membership to new customers during sign up. Increase investments on converting base to plus membership