Course Case: Apprentice Chef

A1: Regression-Based Analysis – Machine Learning

Insight 1

Satisfied customers have strong correlation (0.60) and large OLS regression coefficient with revenue, meaning higher "median meal rating" customers spend and order more meals on average. The factor that has the strongest correlation with customer rating is average clicks on the website (-0.85). This relationship is negative meaning the more clicks and time customers spend on the website the more likely they are to give their experience a bad rating and spend less. The target customers are busy professionals who barely have time cook. Reducing the amount of click will lead to happier customers and higher revenue.

Insight 2

The customer service teams say the majority of their customer interactions are due to complains. Interactions with customer service have a positive relationship when the number of interactions > 10, meaning the customer service team has a positive effect on customers. But when the number of interactions passes 10 the relationship turns negative and the total revenue from these customers is on average lower than for customers with less interactions. Despite the lower average total revenue from these customers, they pay a higher price per meal. Customers investing more per meal are more likely to complain if it isn't alright.

Actionable recommendation

Customers with high meal ratings have a higher average revenue. Clicks per visit have a strong negative correlation to meal rating, suggesting that the more clicks a customer has the lower the rating. Registration understandably requires a significant number of clicks, while ordering should be a quick process. This suggest that the entire process requires too many clicks, is too complicated or the users doesn't find a satisfying alternative and ends up "clicking around" only to be disappointed.[1] Users also access the website to watch helpful videos, but this also should only take > 5 clicks. The user experience needs to be simplified!

The target group consists of busy professionals with little time to waste on picking out the right dinner. Apprentice Chef's should equip their application and website with a search engine so users can find dishes they want, faster. Another added feature is to enabling users to add favorite meals and save their schedule, ultimately offering "one-click" ordering. This creates additional data to improve recommendation if the users should decide to deviate from "the usual". Reduce the number of clicks, leads to more satisfied customers resulting in higher ratings increasing revenues and retention rate.

Final model (Gradient Boosting Regressor) r^2: 0.950

[1] Why 'Reduce Clicks' Needs to be Your E-Commerce Mantra. (2019, June 4). Retrieved January 27, 2020, from https://unata.com/reduce-shopper-clicks/