Apprentice Chef

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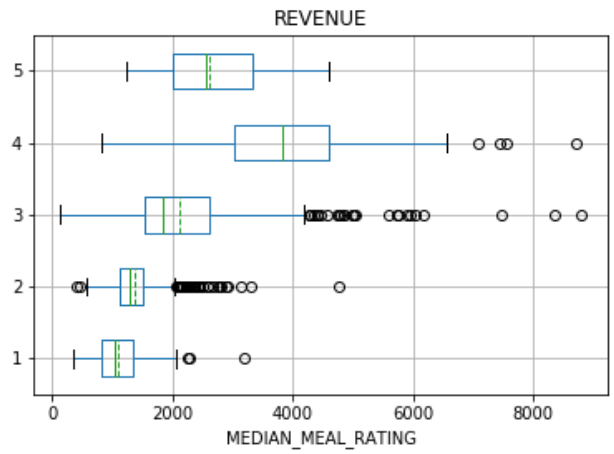
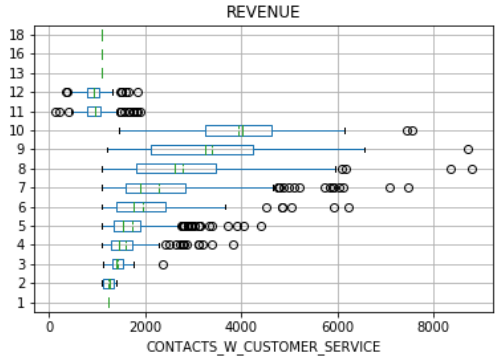
INSIGHT 1: As you would expect for any company for the revenue to increase with higher customer satisfaction. Median revenue seems to be almost doubling with each extra one point for the meal rating, The coefficient for MEDIAN_MEAL_RATING was about 231.96 increase in revenue with every star added. However, in the case of Apprentice Chef the median revenue starts to drop as soon as the median rating reaches 4 stars. This is accounted for in the model through feature engineering technique that was used to create a new variable called out_MEDIAN_MEAL_RATING which had a coefficient of -401.74 and only takes effect after 4 stars rating.

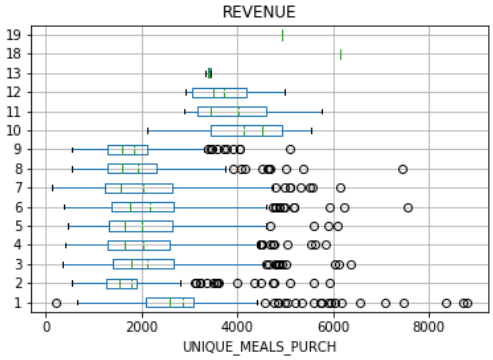


INSIGHT 2: The revenue increases with a higher number of clicks until a certain point. After 10 clicks per visit the revenue starts to decrease by -324.45 with every extra click. This variable is only significant after 10 thus effecting the revenue only after that point. The original variable (AVG_CLICK_PER_VISIT) is insignificant in the OLS model based on the p-value of 0.05. Moreover, the AVG_CLICK_PER_VISIT decreases with MEAL_RATING indicating that people who go above a certain point in their number of clicks are more likely to give low review and generate lower income stream. Thus, we can cluster these customers as “overvalued”.

ACTIONABLE RECCOMENDATION: Use the information provided to cluster your customers and extract value from their commitment towards the service. This would give the company a target customer for example those customers who have ordered for the past twelfth months generate 88% of the revenue (CASE STUDY LAST PAGE). However, going even further into clustering allows various departments to tag customers who for example waste company's resources. By looking at the graph for CONTACTS_W_CUSTOMER_SERVICE we can clearly indicate that after a customer has contacted the company for 11 times or more then his median revenue generation drastically decreases, this would be hinting on the fact that these are the customers who are trying to abuse the 'goodwill' of the company for issuing refunds and so forth. This is already being implemented in big ecommerce conglomerates such as Amazon through the use of a algorithm which identifies customers who request too many unnecessary refunds.

You can also customers who order Unique meals as they tend to generate higher revenue.





Final Model:: KNeighborsRegressor using Standardized Data

R-Square value train/test: 0.8218 / 0.7751

Side note: The customer dataset might not be as accurate as mentioned in the case due to the case stating that for new customers to register they need to specify their phone number and receive a text message, but in the data set some of the mobile numbers are indicated as missing. Thus we should assume the data might be corrupt.