

Apprentice Chef Machine Learning Analysis Write Up

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Actionable Insight: Customer Service Trend

One actionable insight to gain from the Apprentice Chef Dataset is that the revenue trend for contacts with customer service changes after ten. The relationship between contacts with customer service and revenue is positive up to this threshold, but at ten it rapidly drops and shows a negative revenue trend. This is likely because customers contacting customer service more than ten times are having very negative experiences with our products or service, whereas customers contacting customer service less than ten times are still having a positive experience. These negative experiences could lead to loss of customers and revenue. Therefore, we should contact these customers above this threshold to identify the service problems that required them to contact our customer service so many times and address those issues in our service. Addressing these issues in our service will hopefully keep our customers below this threshold of ten, or at least guarantee that the few customers above this threshold are there by chance, and not due to negative experiences.

Secondary Insight 1:

In linear regression, median meal rating was very significant, with a p-value of .000 and a large coefficient of about 312 dollars. If we had data about the median meal ratings or mean meal ratings of each meal, we could see which meals people are ordering and try to improve the recipes of our lower rated meals. This would increase our average median meal rating for our customers which in turn should increase our predicted revenue for these customers by a large margin, as shown by the coefficient.

Secondary Insight 2:

Master classes attended were also significant with a low p-value and large coefficient. This indicates that subscribers who utilized these classes usually brought in more revenue for our company. If we did a better job of promoting these classes to our customers and brought in more students to these classes, our revenue should significantly increase. Competitors such as Blue Apron are also promoting classes to try to drive demand. I believe we should follow suit and promote our classes in cities with a large audience.

Final Highest R^2 : 0.874.

Works Cited

“Blue Apron Brings ‘Unboxed’ Pop-up Series to New York City with Month-Long Pop-up Shop.”
Blue Apron Holdings, Inc., 2018,
investors.blueapron.com/press-releases/2018/05-29-2018-144902390.