

Cloud Kitchen Machine Learning Project

A. Insights

1. Drinks contributes to a huge chunk on revenue

The revenue data that is being provided actually comes from food and drinks that the customers ordered. If we divide the revenue by total meals, it can be seen that some customers spend more than the maximum price of a meal is \$23, meaning a huge part of the revenue are generated from drinks. Looking at it from a proportion basis, 73% of the customers ordered more than \$23 worth of meal set. That is why, it can be inferred that drinks play a huge role on customer's ordering habit.

2. Frequent Contact to Customer service leads to more Revenue

From the model, it can be seen that the number of contacts with customer service also makes an excellent predictor for revenue contribution. This is probably because the customers feel the trustworthiness of the company from the excellent customer service representative. The company should keep up the good work for their excellent customer service support so that they would not lose their credibility on future customers.

B. Recommendation

Based on the insights gained, Apprentice Chef should make a promotion for future customers so they will have a set meal promotion that includes drinks.

As mentioned, the majority of customers ordered their meal-sets with drinks, however the companies did not keep track any record of drinks sold. Judging from that, the company did not really pay attention that the revenue contributed from drinks.

Since the majority of the customers are interested in including drinks on their meal-sets, an applicable recommendation for Apprentice Chef is to focus on the drinks that they sell. Giving a bundle price for meals and drinks will increase their customer satisfaction even further which will lead to more orders and mouth-to-mouth marketing to other people about the company.

Additionally, having more selection of drink offerings might also be beneficial, especially ones that is tailored to a fine-dining like champagne. Another type of drink to be considered will be the healthier option like kombucha or fresh juice, which is trending in the market geography; California.

C. Final Model

Model	Training	Testing
Ridge	0.892	0.8881
GradientBoost	0.9984	0.9852

Linear Regression Table from OLS = 89.2% R-square value

OLS Regression Results			
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Dep. Variable:	REVENUE	R-squared:	0.892
Model:	OLS	Adj. R-squared:	0.887
Method:	Least Squares	F-statistic:	192.6
Date:	Mon, 27 Jan 2020	Prob (F-statistic):	0.00
Time:	15:49:57	Log-Likelihood:	-10723.
No. Observations:	1459	AIC:	2.157e+04
Df Residuals:	1398	BIC:	2.189e+04
Df Model:	60		
Covariance Type:	nonrobust		