HULT
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Apprentice Chef Analysis

A1: Regression-Based Analysis (Individual) – Machine Learning

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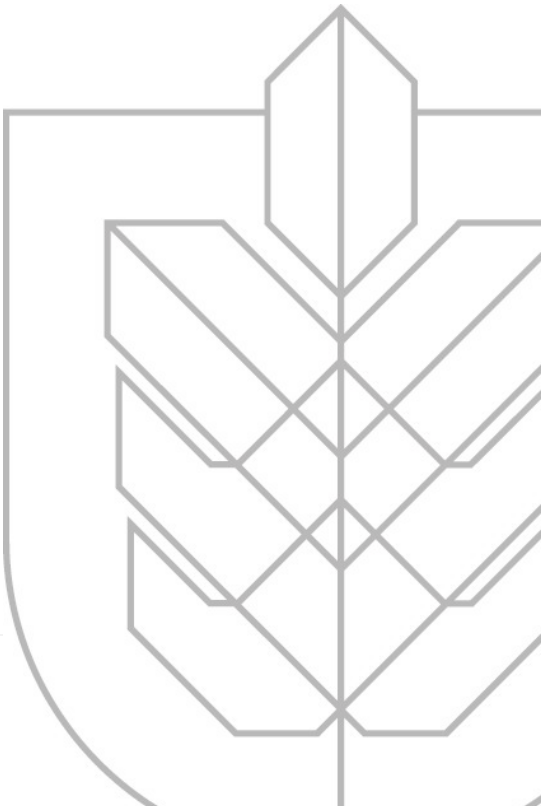

Insight 1

Unsurprisingly the second strongest correlation with revenue was “median_meal_rating” (+0.61), the higher the rating the more revenue we expect. This led me to investigate what features were having the biggest effect on “median_meal_rating”. The average median_meal_rating is ≈ 3, therefore there is room for improvement. Looking into correlation of “median_meal_rating “with other features I found a negative correlation (-0.55) between “median_meal_rating and “avg_click_per_visit”. One of the main value propositions for Apprentice Chef is that It saves busy customers time, however the average “avg_clicks per_visit” was ≈13.5 clicks, far more than what we would expect from the customer journey framework.

Insight 2

Surprisingly “contacts_with_customer_service” is positively correlated (+0.1) with revenue and had a coefficient of +132. The case claimed the customer service team was receiving complaints however it seems for every person contacting customer service, revenue increases by $132. However, when looking at high outliers for “contacts_with_customer_service” i.e. more than 10 times, I found there was negative correlation (-0.36) and coefficient of -1221. Therefore, we can infer that there is a tolerance tipping point where if a customer is contacting customer service more than 10 it starts having a significant negative effect on revenue, - $1221 for every extra “contact_with_customer_service”.

Recommendation

> *90% of people first check out online reviews before making a purchase* (PlanetMarketing, 2020).

With this in mind we should aim to high have higher meal ratings and increase that average “median_meal_rating” from ≈ 3 to target ≈ 4. To do this we might look into the user journey design and reduce the “avg_number_of_clicks_per_session” and we should expect an increase in revenue because of it. To do this we could introduce a better recommendation system so that people spend less time searching. Alternatively, we can also take a page from amazon and introduce one click reordering for customers, this may involve allowing customers to save favorite meals and prompting them to reorder when the immediately open the app.

From the analysis it was also apparent that “avg_prep_vid_time” and “total_photos_viewed” were positively correlated with ratings and revenue, therefore we could capitalize on this by ensuring that the content (videos/photos) on the site/app remain appealing and useful but at the same time be wary of causing users to over click (BRYSON, 2019)

Following the recommendation to lift meal ratings by following the mentioned action steps will lead to a better customer experience and more revenue for Apprentice Chef.

Note: Final model selected was the gradient boost regressor resulting in a R^2 of 0.796

References

BRYSON, C. (2019). *UNATA*. Retrieved from https://unata.com/reduce-shopper-clicks/

PlanetMarketing. (2020). Retrieved from https://planetmarketing.com/blog/why-are-reviews-important/