Food's Gold + ph[0]ton

Data driven marketing opportunities

Of note:

- Food's Gold is a company I made up for the project

- The year is 2014

- The presentation is for Q1 2015

- Here's the link to where I got this dataset on Kaggle - https://www.kaggle.com/rodsaldanha/arketing-campaign

- I've decided that this company actually does sell gold alongside their groceries because hilarious

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Agenda:

1. Question

2. Insight

3. Visualizations

4. Results

5. Conclusion

6. Recommendation

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Question:

- What should we do with 2 years of marketing data?

Methodology:

- Used Numpy and Pandas for data manipulation

- Used matplotlib and Seaborn for data visualizations

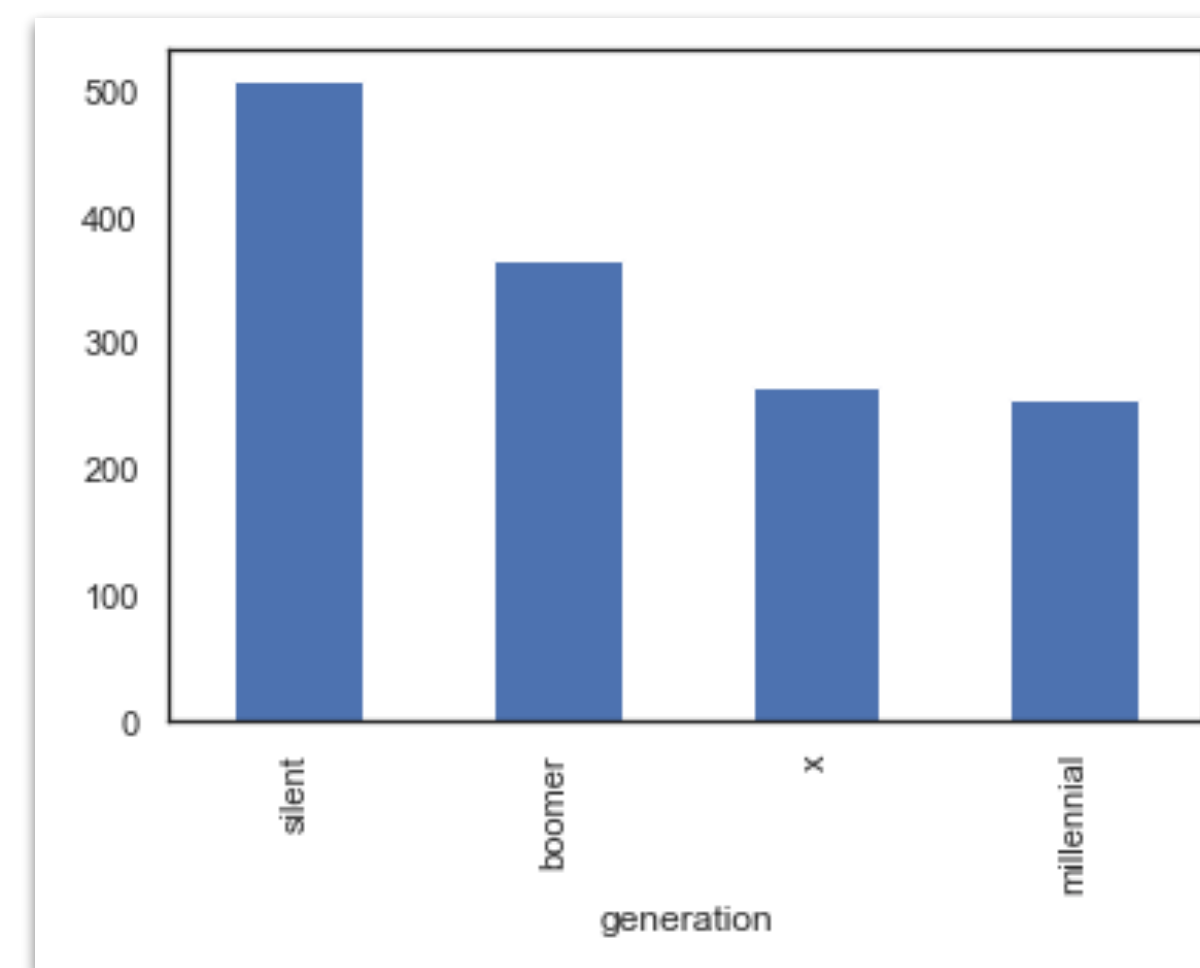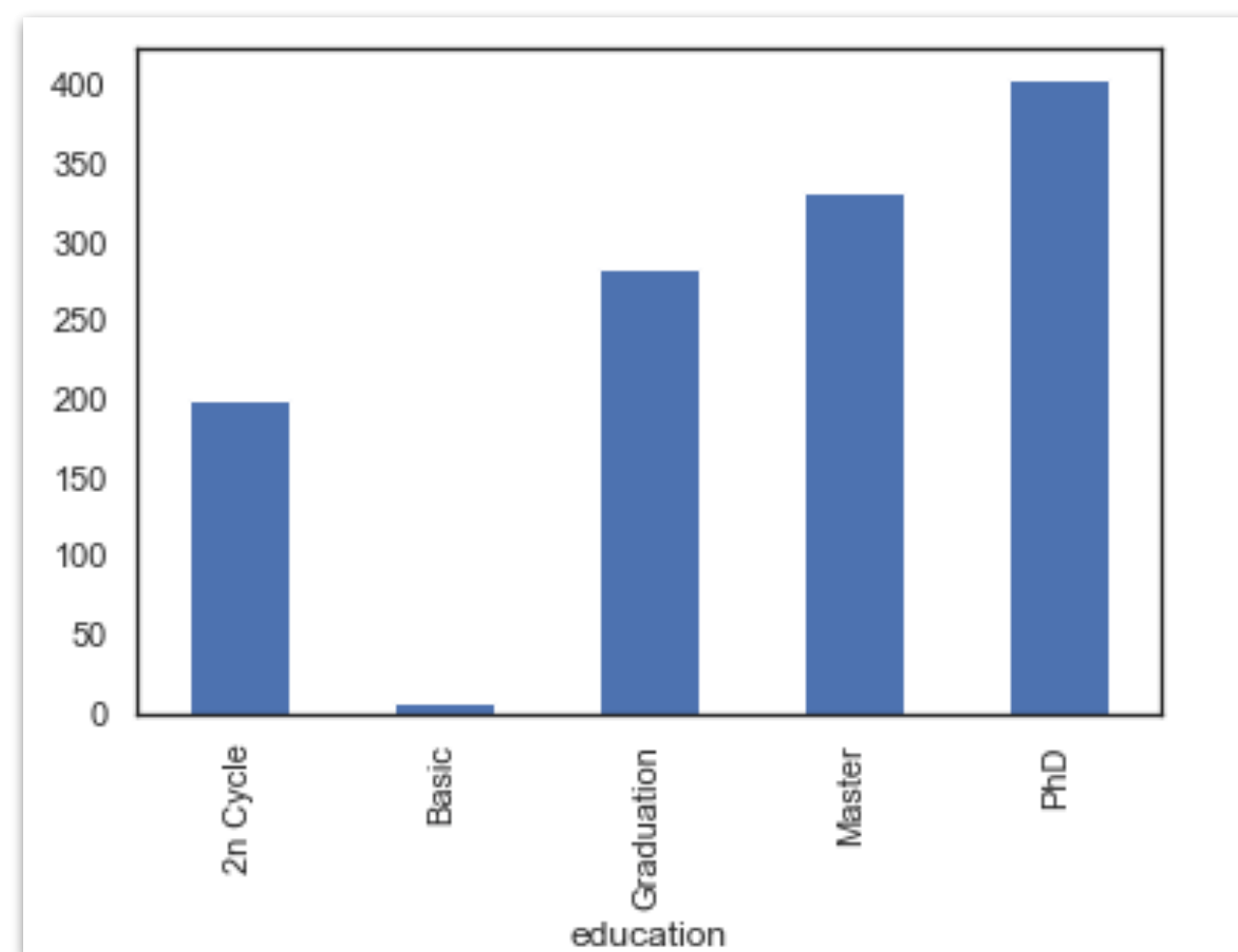- Used SciPy, statsmodels, and scikit learn for data modeling

Data:

- Data captured from 2 years of marketing activities done in house at Food's Gold

- Range: 07/30/2012 - 06/29/2014

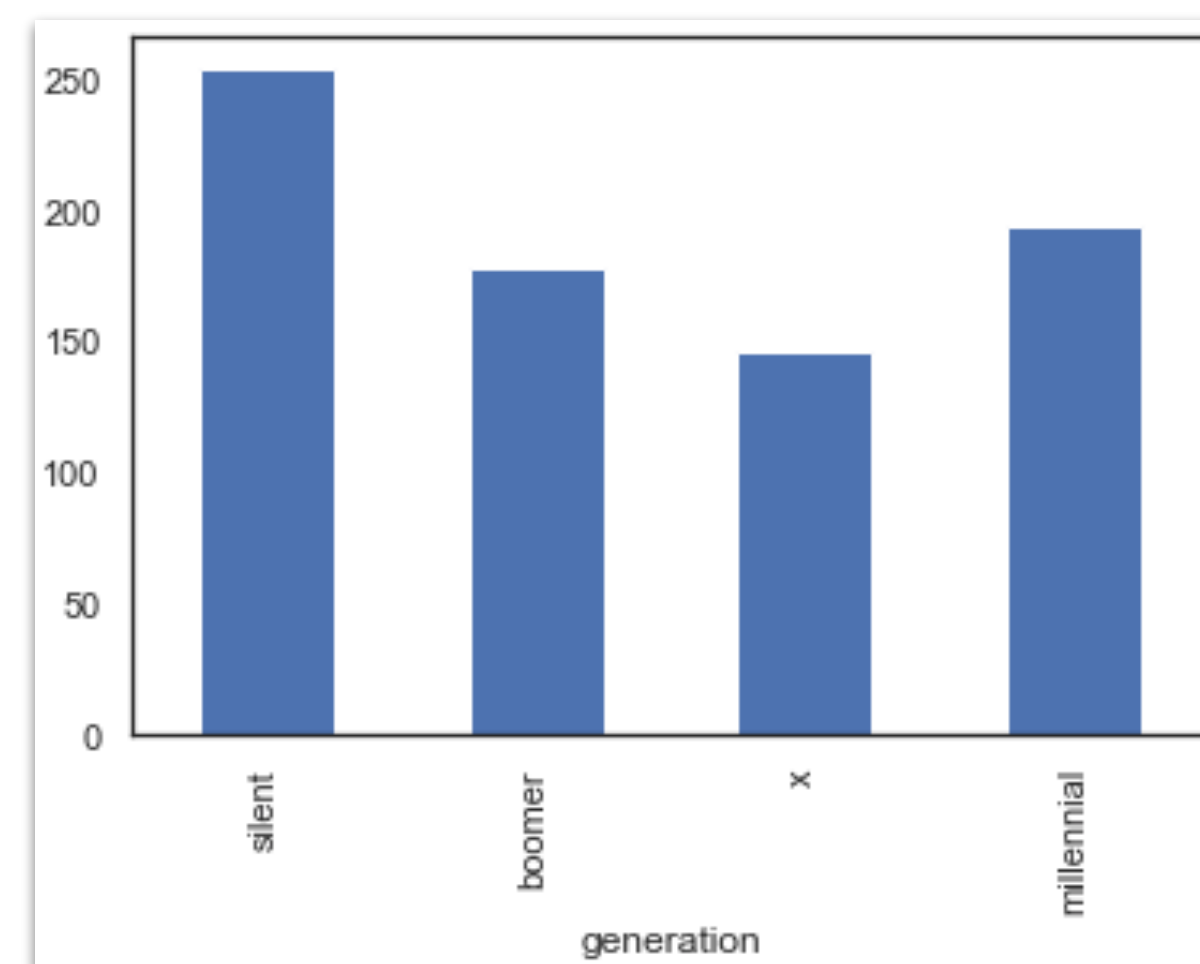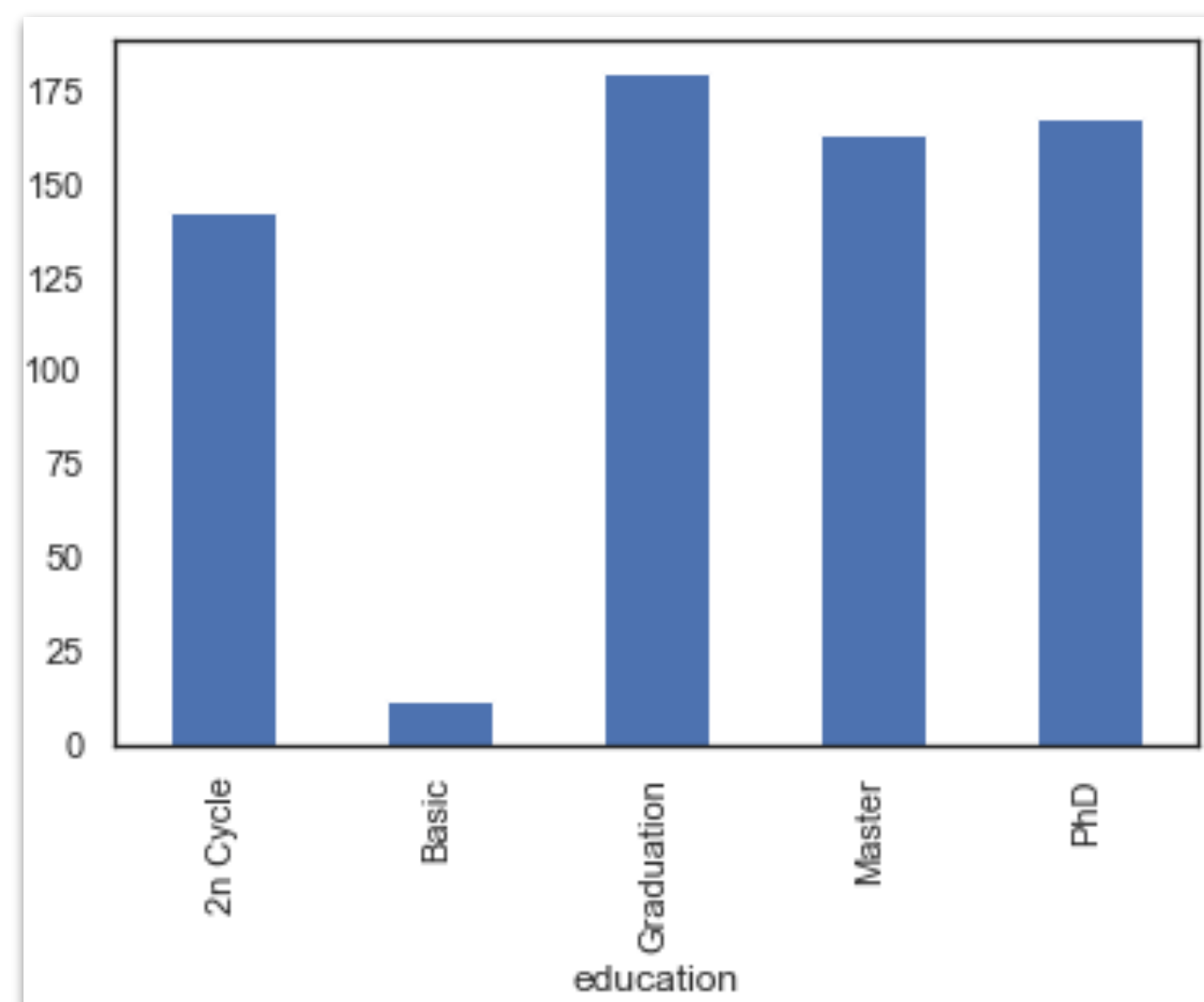- There are a total of 2240 customers
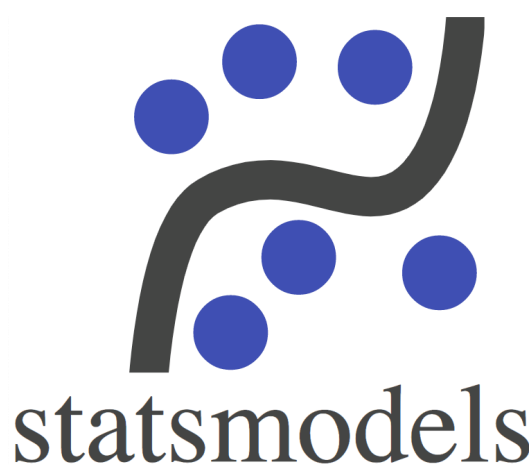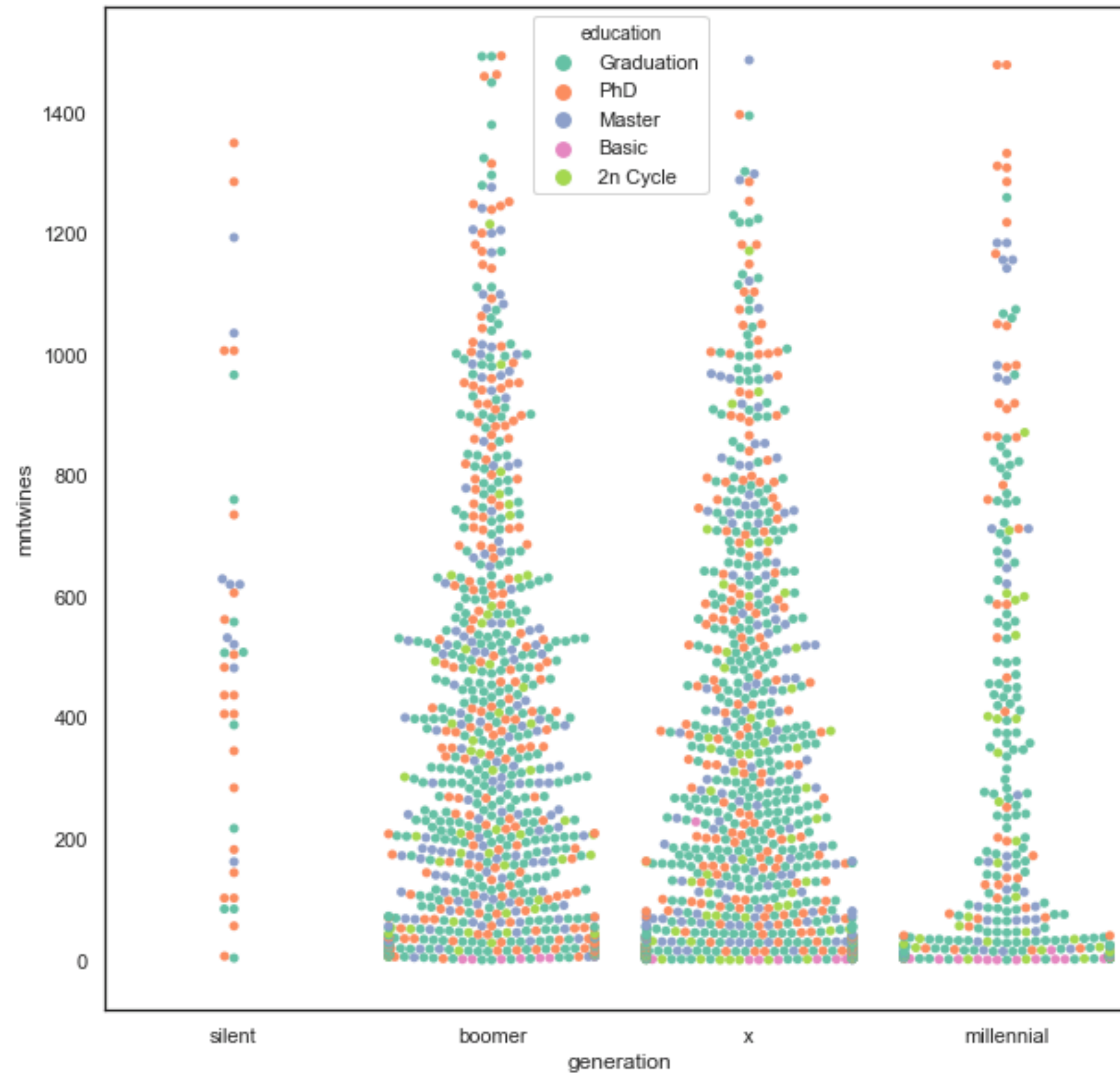
average spend on wine over 2 years

average spend on meat over 2 years

Spoiler alert:

- Wine is Food's Gold's best product

- The average spend on wine is higher than the average spend on all products - meat shown here for reference

- This presentation will focus on wine as the largest growth opportunity
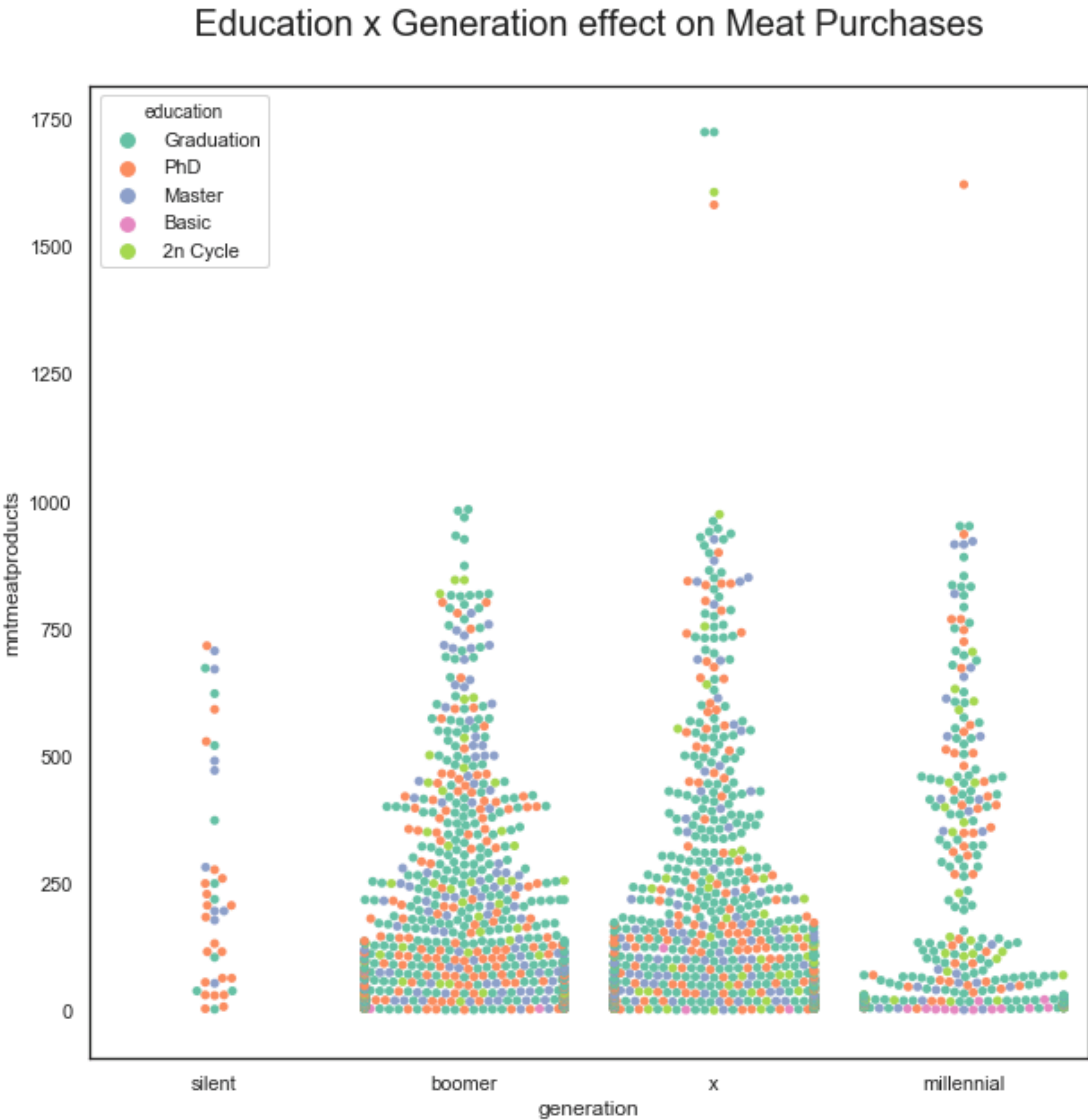
Education x Generation effect on Wine Purchases

So about wine:

- Across all generations and education levels, wine produces the greatest amount of product revenue

- Millennials represent the biggest growth opportunity

- Generation year breakdown can be found here: https://cnn.it/3133o4r

Where's the beef:

- Interestingly, purchase demographics do appear to be similar for each category

- Millennials are DEFINITELY the growth opportunity

- This could produce a halo effect on multiple products

Education x Generation effect on Meat Purchases

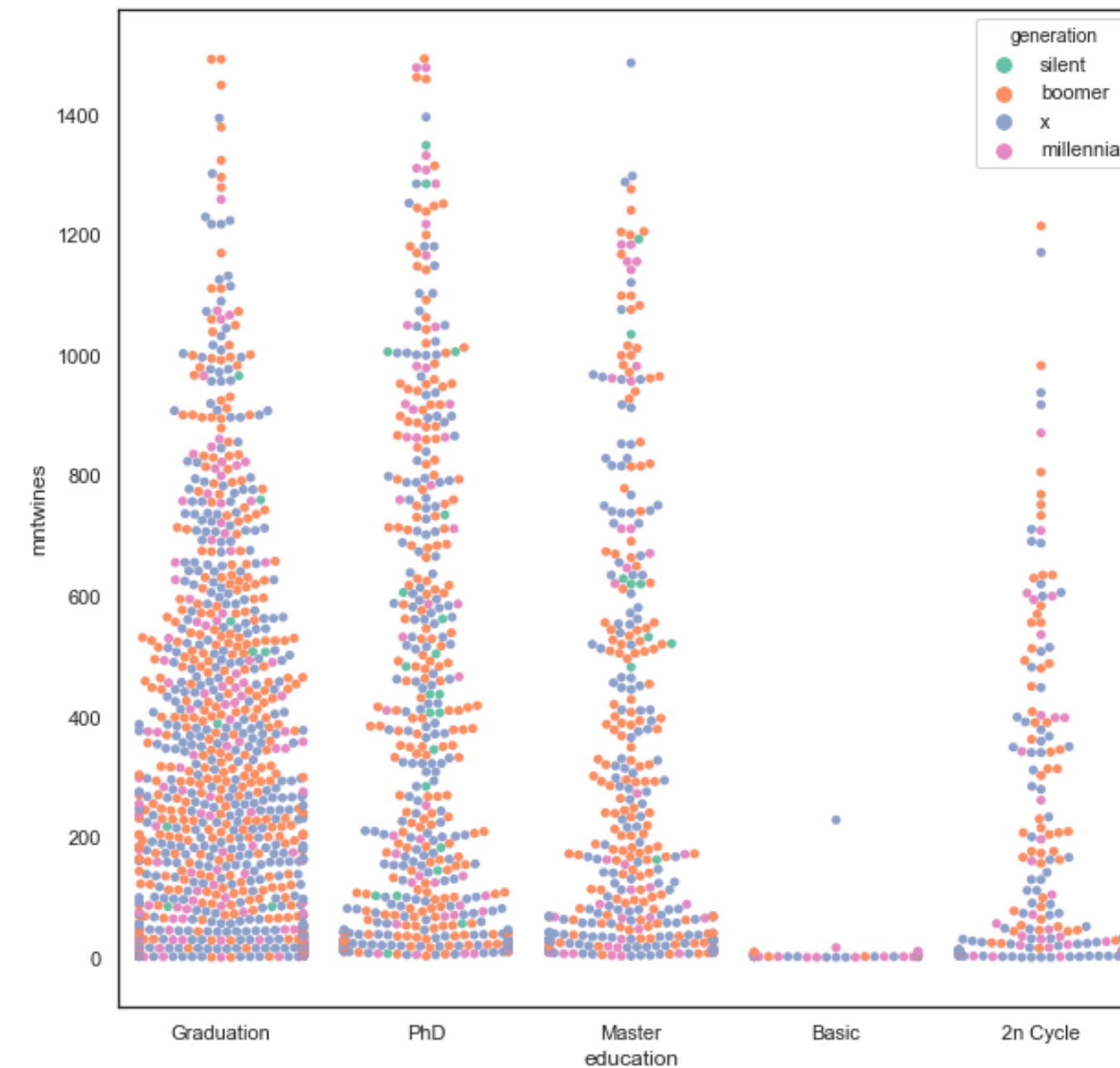Education x Generation effect on Gold Purchases
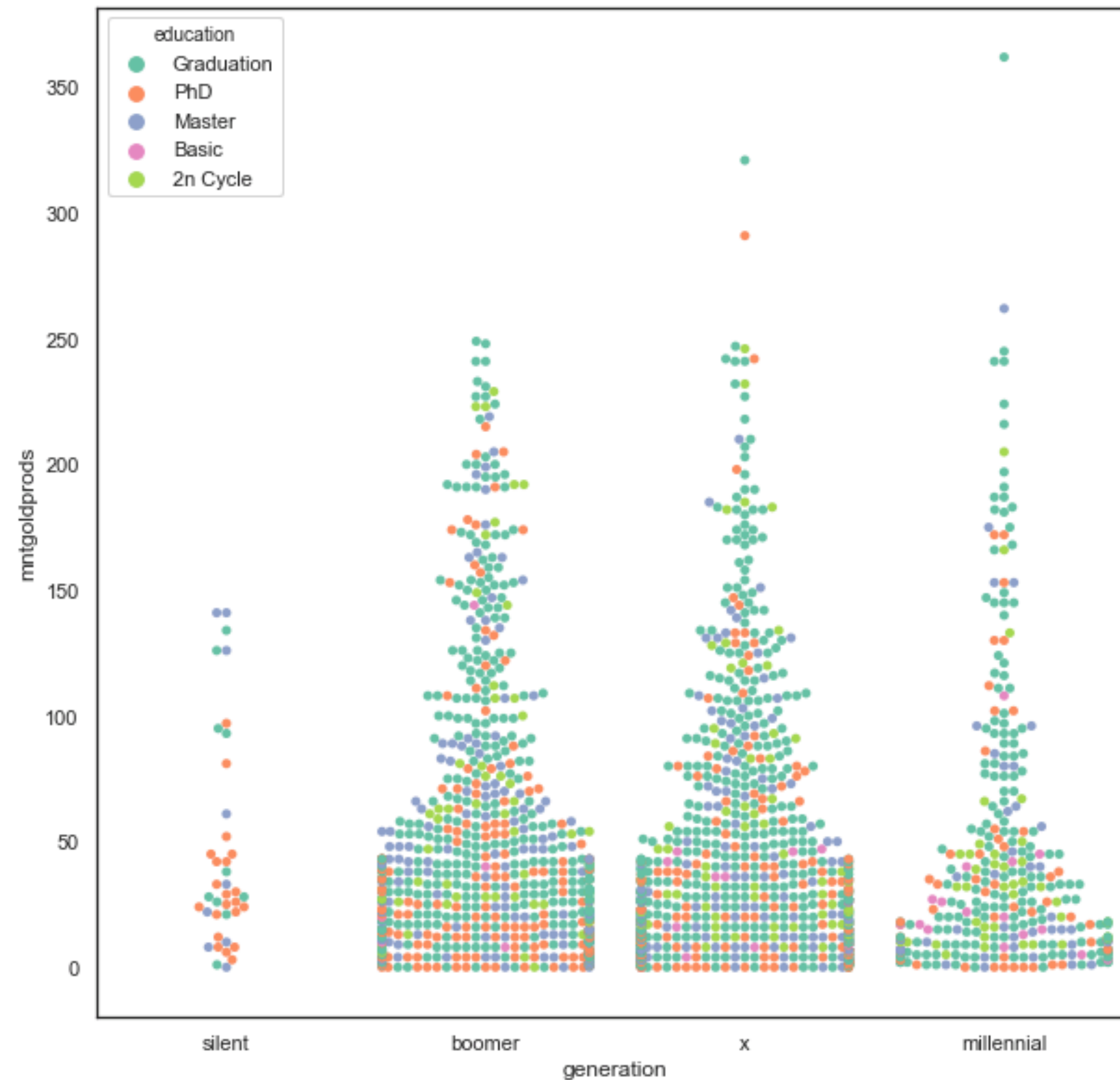
Stay golden:

- This shows that Food's Gold is more successful in capturing more of the millennial demographic with their gold products

- This could prove an effective entrance strategy in targeting a wine promotion

- Additionally, given the niche Food's Gold has, this could help in identifying new partnerships

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A missed segment:

- One additional finding shows that customers with a Basic education (High School Diploma) are underserved

- This would be an opportunity to examine product prices as a potential factor

- An increase in attention here could expand the customer base, specifically due to the millennial market still maturing

Education x Generation effect on Wine Purchases

Education x Generation effect on Meat Purchases

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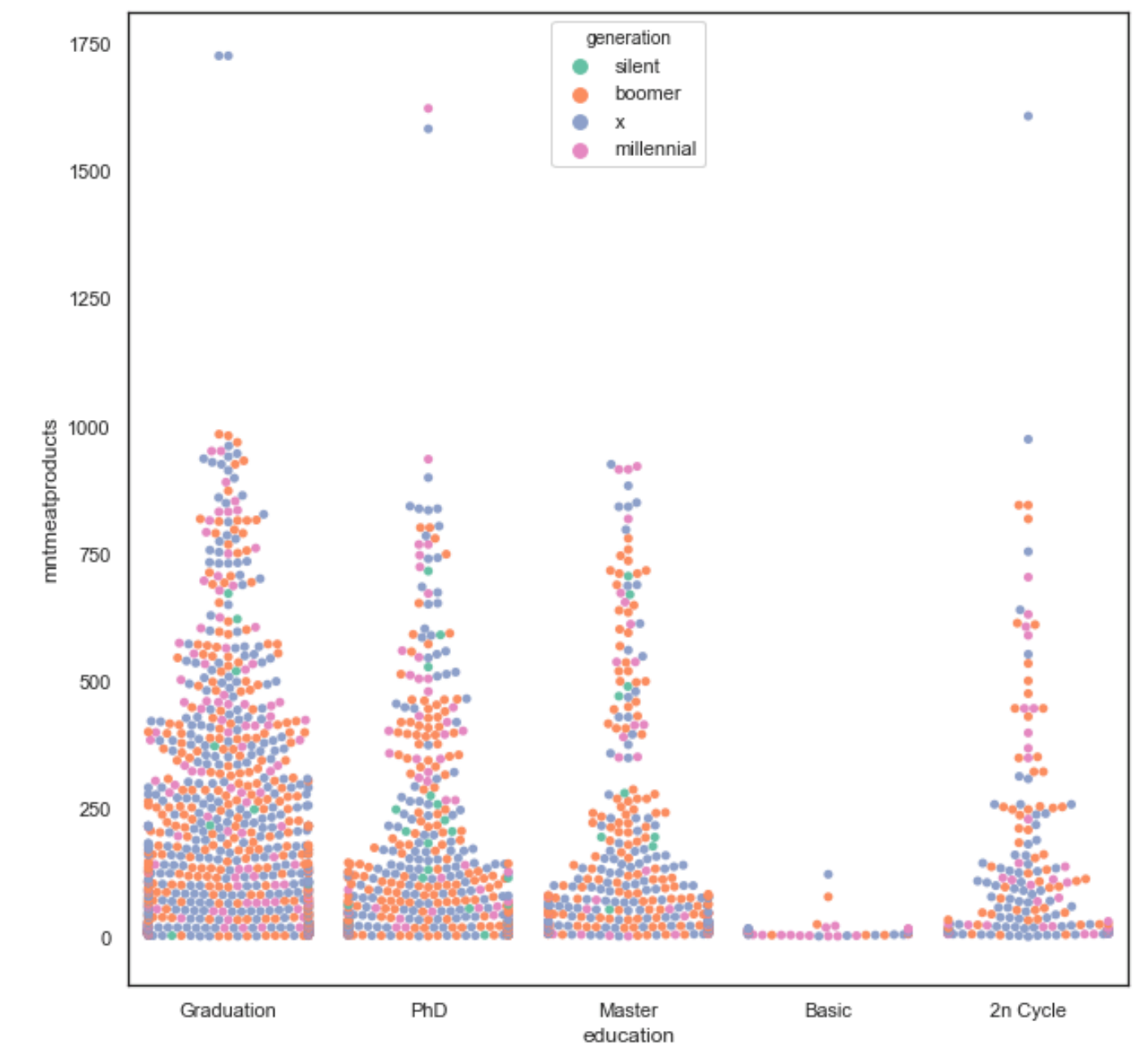
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#2 Poly Training Error:  87.43126820497908 #2 Poly Testing
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#3 F-Test Training Error:  176.68838666766968 #3 F-Test
Testing Error:  203.70550540540967
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Testing Error:  195.84138522503287
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Error:  195.7476059005185
#5 Train R2 0.7381353445435714 #5 Test R2 0.666222001860492
```

Results:

- I ran five models to determine best fit for estimating wine spend

- The recursive model won with an RMSE Z score of 0.51

- This means that our winning model falls within one standard deviation of the average of wine purchases

- This is a good indicator that we can use these estimates to determine budget for the marketing campaigns in Q1 2015

Recommendations:

- Target the millennial demographic

- Potential cross promotion with gold products

- Use this initial analysis to create benchmarks across categories

- Develop roadmap for Q1 2015 and beyond with continued investment in data driven insights

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