Introduction

Companies can use AI to collect insightful data and navigation habits directly from consumers and use it for marketing purposes.
Adding badges not only allows businesses to improve users' interface but also enhances the understanding of customers' preferences to drive sales and increase profits (Seranmadevi R. & Felisiya M., 2019). Whole Foods is taking advantage of the use of badges to engage clients and guide them through their shopping experience.
The food retailer has found an interesting way to classify its products by including them in special diets that can attract customers and simplify their search.
In general, businesses are observing the benefits of applying gamification techniques to drive sales, with increased online customer interactions growing from 30 to 40% (Lunceford S. & Patton A. J., 2012).
Aesthetic design also became meaningful, especially when trying to attract customers to e-commerce businesses. Indeed, because of the daily use of social media, users feel the increasing need of being entertained when surfing online and have higher expectations. In addition, millennials are comfortable with technology and crave variety in media, making them the perfect target for interactive shopping experiences (Lunceford S. & Patton A. J., 2012).
The following analysis aims at studying whether the number of badges used by Whole Foods results in a premium price over the product.

Does the amount of badges increase price?

By analyzing the samples, it can be observed that the data is not distributed enough to draw consistent conclusions. In fact, only 6% of the collected data does not have a badge, while the remaining have from 1 to 12 badges.
I studied the price per oz of subcategories with more than 20 products and concluded that Whole Food does not apply any statistically meaningful price increase for products included in special diets in the Charlestown area.
To verify my hypothesis, I ran a t-test on excel, using the average price per oz of products with 0 badges and of those with more than one badge as variables.

Because the p-value is higher than the chosen significance level of 0.05, the null hypothesis cannot be rejected, implying that there is no significant difference in price terms between the two classifications. With this data, we cannot conclude that there is a relation between the price and the products' labels.
However, it would be interesting to be able to study whether the same applies to other cities, as well as whether as badges increase, product clicks and sales grow.

Insights

I recommend Whole Foods take advantage of the badges used to promote its products and value proposition. This can be done by increasing their presence on the company's social media.
In fact, in addition to revolutionizing traditional consumer-brand relationships, social media can positively influence consumer engagement with brands (Lu, Q. S. & Miller R., 2018).
For example, Whole Foods could create content in which popular food bloggers use their products to create recipes suitable for different healthy dietary preferences.
Indeed, in the green retail sector, consumers are increasingly making the connection between diet and health (French S. & Hale T., 2010).
In the description, a link can be additionally included to directly place all the products in the personal shopping cart and therefore incentivize purchases.
With the same tags, nutritionists have the power to explain the advantages of following certain eating habits and motivate users to choose healthier products.
In addition, the company could leverage its partnership with Amazon to tailor the content to customer consumption habits. Indeed, the number of Amazon Prime subscribers in the United States will increase to more than 176 million by 2025 and Whole Foods can collect impactful information through the platform (Statista, 2022).
As a result, Whole Foods has the opportunity to customize its featured products to each customer who logs in through Amazon Prime and thus maximize its sales potential.
Research shows that integrating an automated recommender system into the user experience has a dramatic impact on the value to the user. Besides increasing customer satisfaction, it also helps build demand predictions (Konstan J. A. & Riedl J., 2012).

Also, based on previous purchases and on the click map while browsing, it is possible to suggest to the customer to continue searching for products based on a specific dietary preference, while also reminding the health benefits they would gain from it.
This strategy would not only increase the interactive experience for the customer but would also help the company to drive habits toward higher-margin products.

Appendix

t-Test: Two-Sample Assuming Equal Variances.
Variable 1: Average price per oz for products with 0 badges.
Variable 2: Average price per oz for products with more than 1 badge.

	Variable 1	*Variable 2*
Mean	0.72	1.66
Variance	0.39	5.47
Observations	2.00	52.00
Pooled Variance	5.37	
Hypothesized Mean Difference	-	
df	52.00	
t Stat	(0.57)	
P(T<=t) one-tail	0.29	
t Critical one-tail	1.67	
P(T<=t) two-tail	0.57	
t Critical two-tail	2.01	

Conclusions: The P-value is higher than the significance level (0.05), so the null hypothesis cannot be rejected. Therefore, there is no significance difference between the products with zero badges and the ones with more than one badge.

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