

Assignment 5 (Team Project)

TableTalk Website Business Improvement Report



Team 6

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Executive Summary

The website called TableTalk Boston was created through teamwork for our company TableTalk to help generate more customers and traffic to popular local restaurants and generate profit.

Google Analytics was deployed to monitor real time traffic on our website by generating the unique tracking ID.

In addition, Google Optimize was utilized to perform the controlled experiments of the website to test two null hypotheses which are whether the video background of our website will decrease the bounce rate and increase page views per session or not and whether the revised font in our home page will generate more page views per session or not. The results turned out be that the image background of our website will decrease the bounce rate instead of the video background. However, in our second experiment, there were not many differences in terms of traffic and users. Thus, we concluded that both fonts will generate the same amount of traffic approximately.

Lastly, business recommendations were conducted based on experiment results that we should explore more traffic channels, improve users' experience and deploy further online experiments to expand our business and improve our website performance.

Introduction

Analytical tools such as Google Analytics and Google Optimize were deployed to conduct controlled experiments and monitor real-time data of our website called TableTalk Boston to generate insights into how to improve the overall performance.

Web theme and content

Our website is called TableTalk Boston, which cooperates with popular local restaurants and generates profit by introducing more customers. We built our website through Squarespace, and the link is <https://gold-endive-jy7f.squarespace.com/>. Figure 1 shows the homepage.

The website content consists of three major parts. First, we divided local popular restaurants into five categories, namely Chinese, Japanese, Seafood, Italian and Creative Desserts. We set our website's landing page as the home page which includes 5 unique links to each of the categories. In addition, we create a membership subscription part at the middle of home page. Moreover, we provided our group members, address and contact information at the bottom part of each page in our website.

Navigating to each category page, there is a brief description of each restaurant we listed on our website. Two examples of the restaurants list are demonstrated in Figure 2. Customers can click directly through the restaurant name or picture which includes a hidden link to obtain more detailed information about each restaurant.

We included the specific introduction of each restaurant such as customers' reviews, menu, restaurants' availability and locations to help customers make reservations through our website (see Figure 3).

Analysis of Google Analytics Metrics

To analyze the performance of TableTalk, we setup two accounts, Google Analytics and Google Optimize (see Figure 4), to assist us collect the specific data and form analysis reports. Our key metrics are Bounce rate, Average Session Duration, and Pageview per session.

Strategies for Generating Traffic

Website traffic is important because it helps generate revenue on the website by promoting products or services. In addition, it will attract potential customers who visit our website, increasing awareness of our service among people who are searching online. There are two strategies that our team used to generate website traffic:

1. Social Media: Sharing stories and posts through social media.
2. Email Marketing: Sending email newsletters to people.

In the initial phase, we generated our website traffic through WeChat. Then, we expanded to two more traffic channels, such as Instagram and email campaigns, to increase traffic in the experimental phase.

WeChat, which displays as ‘Direct’ in Google Analytics, and Instagram, which displays as ‘Social,’ are two social media platforms that we used to generate traffic. Additionally, we implemented an email campaign of a welcome email series to build familiarity with our new subscribers. In the following section, the performance of these three channels will be analyzed. Figure 5 shows that the majority of website traffic comes from ‘Direct’ (WeChat), which accounts for 80.2% of traffic, followed by the email campaign at 8.63%, and ‘Social’ (Instagram) at 7.11%. Among these three channels, the Instagram channel has the lowest bounce rate at 31.25%, but the shortest average session duration of 1.85 minutes. The ‘Direct’

(WeChat) channel has a bounce rate of 33.33% and the longest average session duration of 3.1 minutes. These results currently indicate that the 'Direct' (WeChat) channel is the best channel for generating traffic among the three channels.

Our email campaign is a welcome email (see Figure 6) that introduces our website and aims to attract users who are interested in Boston restaurants. We sent the same email campaign to 74 subscribers on three different occasions. While an average of 74% of subscribers opened our campaigns, only an average of 9.03% of subscribers ultimately clicked through to our website. Our team speculates that the low click rate may be due to targeting the wrong audience and/or having unattractive campaign content.

Audience Report

During the period of April 1st to April 16th, 2023, Figure 7 shows the website received a total of 68 sessions. The average session duration was 9 minutes and 30 seconds, and the bounce rate was 23.53%. In part of demographics, the website's primary audience was located in the United States, accounting for 88.24% of all sessions, followed by China (8.82%) and the Netherlands (2.94%). Furthermore, the majority language of the website's users was Chinese (64.27%), followed by English (32.35%), and Russian (2.94%). In part of mobile, mobile devices accounted for 61.76% and the desktop was 38.24%. Moreover, Figure 8 shows most mobile users access the website via iPhone (95.24%). The bounce rate for mobile devices (45.45%) was higher than for desktop users (13.04%).

From the collected data, it can be visualized that the website's primary audiences are in the United States and most of them are Chinese because many international students are Chinese. Additionally, they access the website via mobile devices, particularly iPhone.

Moreover, the bounce rate for mobile devices is higher than for desktop users, which could be due to issues with the mobile user experience. Therefore, the website should prioritize improving this issue to reduce bounce rates and increase engagement.

Behavior Report

In the same period, our website received a total of 873 pageviews, with an average time on page of 48 seconds. Out of the total pageviews, 328 were unique. The website had a bounce rate of 23.53% as mentioned in the audience part and a percent of exit rate of 7.79%. Furthermore, the most viewed page on the website was the homepage followed by seafood page, Chinese page, and Japanese page with 147, 77, 73, and 51 pageviews, respectively, whereas Italian food didn't get much attention with 40 pageviews. These data are shown in Figure 9.

In Figure 10, the durations of average time on page, shown in the page list, were 1 minute 41 seconds, 19 seconds, 35 seconds, and 6 seconds respectively. The top three pages with the highest bounce rate were dessert page, seafood page and home page with bounce rates of 50%, 50%, and 25.53%, respectively.

In the report of exit pages (see Figure 11), the top three pages with the highest exit rate were home page, the-seafood-restaurant-3 page the dessert restaurant page, with exit rates of 39.71%, 11.76%, and 7.35%, respectively.

From the data, we can conclude that Asian restaurants are popular among Boston restaurants because many international students are from Asia. Therefore, the website should be improved by adding various Asian restaurant content and more pictures of Asian food in a campaign to attract people to our website.

Online Controlled Experiments

Based on the analysis of the initial data collected, we found three problems that need to be solved and improve the performance of our website:

- Problem 1: The number of new users is low.
- Problem 2: The high bounce rate is not as our expectation.
- Problem 3: The number of page views per session is not sufficient and needs to be increased.

Problem 1 was solved by expanding our traffic channels to include Instagram and email campaigns. Problems 2 and 3 will be addressed by running two online controlled experiments to determine if they improve website performance.

Experiment 1: Changing the color of Homepage's Font

Experiment 1 involves testing two variants: the original variant and the variant of changing the homepage font color (see Figure 12). Our hypothesis was that changing the homepage font would increase pageviews. The experiment ran for three days (April 17th - April 20th) and collected 92 sessions. We aimed to measure pageviews per session for the original version versus the variant version.

Observed data from Google Optimize (see Figure 13) shows that the original version had higher pageviews per session rate of 2.35 compared to the variant version. Additionally, the Optimize analysis indicates that there is a 55% chance that the original variant will be the best. The modeled pageviews per session estimate what Optimize predicts the pageviews per session will be in the long run. For the original variant, the model suggests a 95% chance that the

pageviews per session will be between 1.9 and 2.8, with a 50% chance between 2.1 and 2.5. The best estimate for pageviews per session in the long run is 2.3. However, the model also suggests that the best estimate for the variant of changing the homepage font will be 2.3 pageviews per session, the same as the original variant, and the modeled improvement is predicted to perform 27% better than the baseline in its best case and perform 24% worse than the original in the worst case.

The modeled pageviews per session graph in Figure 13 depicts a short increase in pageviews per session for the variant of changing the homepage font, but slightly lower than the original variant. After conducting an optimized analysis, we were unable to accept the null hypothesis that changing the homepage front variant would result in an increase in pageviews per session. This was due to the lack of a significant difference between the two variants, indicating that whether or not we change the homepage front may not affect our pageviews. As a result, we may need to reconsider using the variant of changing the homepage front.

Experiment 2: Changing the Background of Homepage

In experiment 2, we assume that a vivid homepage background will keep visitors browsing our website for a longer time than a statical background. This assumption is in terms of the metrics of longer session duration and less bounce rate. Therefore, we designed an A/B test on the different backgrounds on the homepage. The original page background is a video of a set of cale. The compare test background is a steak image (see Figure 14). The experiment was running for 3 days, from April 26th to April 29th. The traffic of visitors comes from two main methods, social media, and Email marketing. During this time, we acquire 24 sessions in

sums. 15 sessions were assigned to the original page, and 9 sessions to the image background page.

Reviewing the results in Figure 15, we found that regarding session duration, both variants have an equal chance to be the best choice. The optimize analysis line charts shows the difference between these two variants is only 2 seconds. In addition, the observed duration is basically the same, around 2 minutes and 31 seconds. So, we can conclude that the background has no effect on increasing the session duration.

On the other hand, however, the bounce rates show a huge difference. The image background has a 91% probability to be the best choice for our website. Compared to the calculated bounce rate of the image background is 22.22%, which is a very good rate, the original page with video background has a poor rate, of 53.33%. It is obvious in Figure 16 that the line chart illustrates the image background has a lower bounce rate. The 95% confidence interval of the image background is from 6.3% to 56.4%, while the original page is from 28.8% to 75.8%.

Since this result does not support our hypothesis, we checked the performance of our pages. We found that when using video as background, the loading time will extend to more than 5 seconds, while image background can be loaded immediately. Hence, if we stick to the video background, we will need a technician to help us reduce the loading time. In this scenario, we believe that the image background will be suitable for improving the user experience on our website.

Recommendations

According to the characteristics of TableTalk website and the experiment performance, we suggest to do more in the following three aspects:

1. Increasing Traffic Channels

Our team suggest using more social media platforms such as Facebook, TikTalk, and Twitter to promote our website. Also, sharing interesting content, high-quality images, and engaging videos will encourage users to visit TableTalk website.

On the other hand, we can utilize paid advertising channels, such as Google Ads, Facebook Ads, or Instagram Ads to drive traffic to our website. It can provide immediate results on search engine, and deliver our website exactly to the target audience.

2. Improving User Experience

User experience is crucial to keep stickiness between visitors and the website. We have two advices to reach this goal:

- Optimize website speed:**

Based on the result of experiment 2, one way is to change our website background to a statical image, so that visitors can open it quickly.

- Making our website mobile-friendly:**

With more users accessing websites through mobile devices, it's important to ensure that our website is optimized for mobile devices. This includes using responsive design and ensuring that all content is easily accessible on smaller screens.

- **Adjusting website content to fit with user:**

Based on the collected data from Google Analytics, it should increase the number of Asian restaurants listed on the website, and include more detailed information such as Korean restaurants, Thai restaurants, etc. Thus, Table Talk can become a destination for Asian food lovers and attract a large user base overall.

3. Trying other online experiments

As a limited time, we just ran two experiments to explore the factors influencing user behaviors. To discover more meaningful factors, we can run other experiments, such as homepage layout, search bar, and user interaction forum. By conducting these experiments, we can gain more valuable insights into what works and what does not on our website and make data-driven decisions to improve the performance of user experience.

Appendix

Figure 1

Homepage of TableTalk Boston

TABLETALK BOSTON

Home Chinese Japanese Seafood Italian Desserts Login

CHINESE JAPANESE SEAFOOD

ITALIAN DESSERTS

EMBARK ON A CULINARY JOURNEY IN BOSTON

BECOME A TABLE TALKER

For \$29.99 per month, Table Talk subscribers get 5 - 10% off eligible orders over \$15. These benefits apply to select restaurants available on Table Talk in Boston.

SUBSCRIBE

Sign up with your email address to receive news and updates.

Email Address

We respect your privacy.

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Figure 2

Example of Restaurants List Pages

1. Japanese Restaurants

TABLETALK BOSTON

Home Chinese Japanese Seafood Italian Desserts Login

 **OISHII RESTAURANT**
Rating: 4.6/5.0
"My father owned restaurants, and growing up in different places I always witnessed my father teaching his employees that "you have to "use your heart to cook your dishes", and the chef's job is not simply just to "throw food on plate.""

 **TORA JAPANESE RESTAURANT**
Rating: 4.3/5.0
"Poke bowls and Kaisen Don (sashimi and rice bowls) are emphasized at this intimate Japanese eatery."

2. Italian Restaurants

TABLETALK BOSTON

Home Chinese Japanese Seafood Italian Desserts Login

 **THE DAILY CATCH**
Rating: 4.1/5.0
"Famous for its Sicilian-Style specialties, this restaurant in serves homemade Black Pasta made from squid ink, along with Fried Calamari. Try the famous Lobster Fra Diavolo served "In the pan". In addition, they offer New England's freshest seafood served over pasta with our delicious red sauce. Unchanged since 1973."

 **COPPA ENOTECA**
Rating: 4.0/5.0
"Coppa is an intimate enoteca tucked away on a quiet street in Boston's South End featuring Italian small plates by James Beard Award-winning Chefs Ken Oringer and Jamie Bissonnette. The menu features made-in-house pastas, pizzas, a unique charcuterie program, and a diverse natural wine and cordial program."

 **CARMELINA'S**
Rating: 4.5/5.0
"Carmelinas is a family owned and operated restaurant located in Boston's historical North End. Owner and executive chef Damien DiPaola, along with 7 year Chef di Cucina, Michael Hollenkamp, put extra love and attention into every single one of Carmelina's dishes."

Figure 3

Example of Detail Page

The screenshot shows a detailed view of the Teazzi Tea website. At the top, there's a navigation bar with links to Home, Chinese, Japanese, Seafood, Italian, Desserts, and Login. Below the navigation is a large banner featuring the text "TEAZZI TEA" and some blurred images of tea cups. Underneath the banner is a horizontal scrollable image strip showing various tea cups and a storefront sign. The main content area starts with a section titled "OUR MENU" with a "View Menu" button. Below this is a "WHAT PEOPLE ARE SAYING" section containing two reviews:

First time I went there, got a house special milk tea and it was amazing and stood out amongst the many boba tea shops in Chinatown so I had to return to try a fruit tea. The second time, got a grapefruit fruit tea with jelly and this is better than Gong Cha grapefruit tea. It tasted so fresh and had real grapefruit pieces in it - must try. Third time, got one of the winter seasonal items, Caramel cinnamon milk tea and had that with tapioca. Their tapioca is so sweet and perfectly "QQ". I really like the caramel cinnamon flavor, never had milk tea with that flavor before so it was a great first try.

If you like barley/oats, you have to get the House Milk Tea! I absolutely love barley and this drink is a very interesting blend - although not for everyone - of my favorite things. It's normal milk tea with chewy, soft boba that doesn't taste like it's been sitting there for a long time along with barley-type oats. I got my drink with 30% sugar because sometimes boba is too sweet and makes my head hurt, and the flavor is amazing and I really enjoyed it! My only caveats are that the drink is \$7 which is quite pricey even in today's economy, and my tea was a bit strong in terms of tea to milk ratio. Otherwise though, I loved my drink! PS - the shop is located in a broader store which are pictured (I forgot to take pictures of the boba itself)!

— Katherine H.

Also, not to mention the atmosphere in there is fantastic. With kpop music playing, for an Asian American like me, it is like living a dream. Best Boba tea shop in Boston.
— Vincent Y.

LOCATION:
31 Harrison Ave.
Boston, MA 02111

HOURS:
Mon-Thurs/Sun 11:00 a.m.-21:00 p.m.
Fri-Sat 11:00 a.m.-22:00 p.m.

CALL:
857-350-3156

WEBSITE:
<https://teazzi.com/>

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Figure 4

1. Google Analytics Account

The screenshot shows the Google Analytics dashboard with the following interface elements:

- Top navigation bar: All, Favorites, Recents, Search bar, Visit Platform Home.
- Header: All accounts.
- Table structure:

Analytics Accounts	Properties & Apps	Views
Demo Account 54516992	TableTalk UA-262836162-1	All Web Site Data 287883171
Foods Lover 258898830	TableTalk - GA4 370935666	☆
TableTalk 262836162		

2. Google Optimize Account

The screenshot shows the Google Optimize dashboard with the following interface elements:

- Top navigation bar: Optimize, All accounts.
- Alert message: Google Optimize will no longer be available after September 30, 2023. Your experiences can continue to run until that date. We remain committed to enabling businesses of all sizes to improve your user experiences and are investing in A/B testing in Google Analytics 4. Learn more.
- Buttons: Create account.
- Table structure:

My Account	+	⋮	
Container name	Running	Total	Container ID
My Container	1	4	OPT-MK67K2D

Figure 5

Traffic Channels

Default Channel Grouping	Acquisition			Behavior		
	Users	New Users	Sessions	Bounce Rate	Pages / Session	Avg. Session Duration
	185 % of Total: 100.00% (185)	185 % of Total: 100.00% (185)	290 % of Total: 100.00% (290)	33.45% Avg for View: 33.45% (0.00%)	5.87 Avg for View: 5.87 (0.00%)	00:04:17 Avg for View: 00:04:17 (0.00%)
1. Direct	158 (80.20%)	158 (85.41%)	204 (70.34%)	33.33%	4.91	00:03:06
2. Email	17 (8.63%)	12 (6.49%)	32 (11.03%)	43.75%	3.28	00:02:25
3. Social	14 (7.11%)	13 (7.03%)	16 (5.52%)	31.25%	3.69	00:01:51
4. Referral	6 (3.05%)	1 (0.54%)	34 (11.72%)	20.59%	15.56	00:14:47
5. (Other)	2 (1.02%)	1 (0.54%)	4 (1.38%)	75.00%	1.50	00:00:03

Figure 6

Email Campaign

Welcome to TableTalk Boston

Craving good food, but don't know where to eat in Boston?

Let's TableTalk help you.

Dear students of Class AD688,

Are you tired of eating the same old food every day? Do you want to try something new and exciting? Then we have great news for you! We are excited to introduce our Table Talk, a carefully curated list of the best local restaurants featuring seafood, Japanese cuisine, Chinese food, Italian cuisine, and desserts.

Our team has gone above and beyond to find the most popular and highest-rated restaurants in the area, so you can indulge in delicious meals and discover your new favorite spot. From casual dining to fine dining, we have something for everyone.

So, what are you waiting for? Browse our Table Talk today and start planning your next dining experience. We can't wait to hear about your food adventures, so please don't hesitate to share your feedback with us.

Click here





Our mailing address is:
1010 commonwealth ave., Boston, MA, 02114

Want to change how you receive these emails?
You can update your preferences or unsubscribe from this list.

Figure 7

Audience Overview

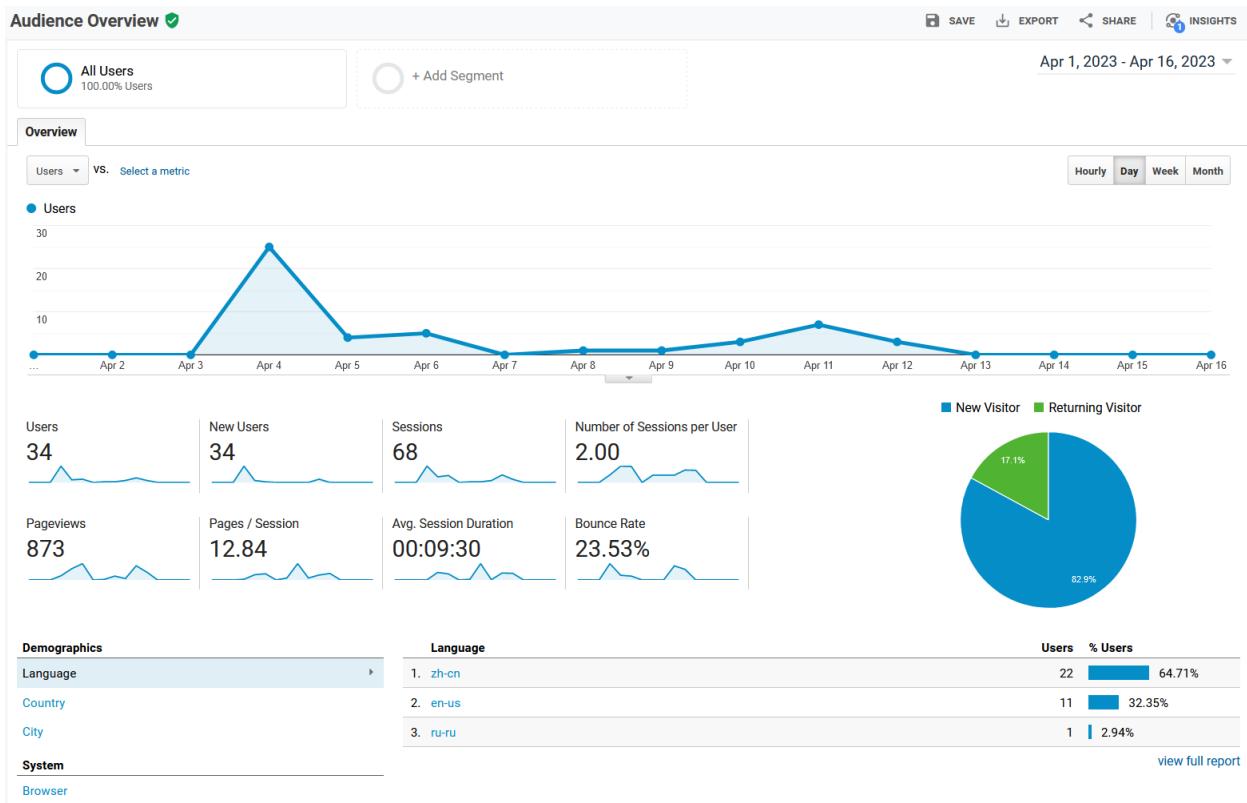


Figure 8

Audience Overview - Mobile Platform

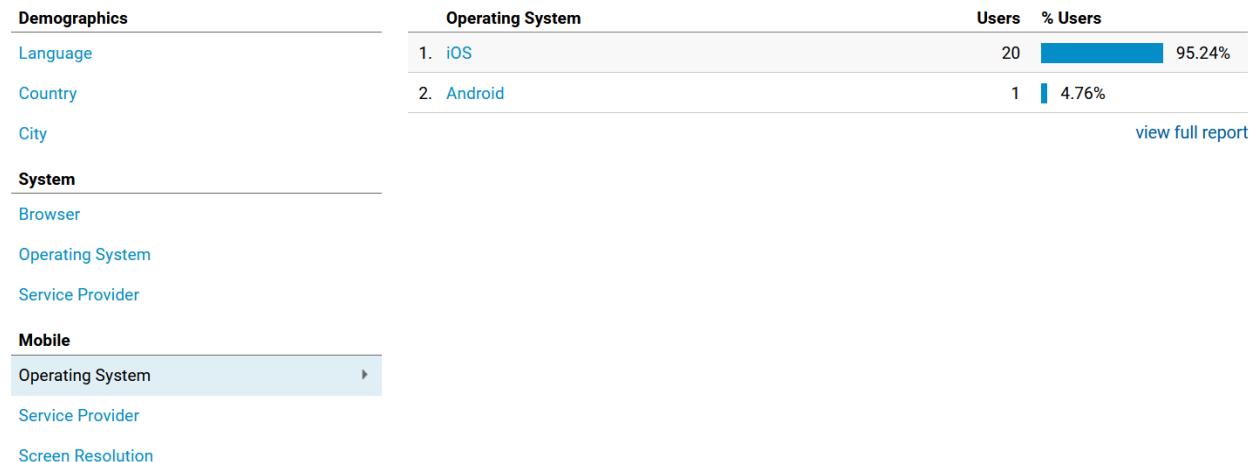


Figure 9

Behavior Overview

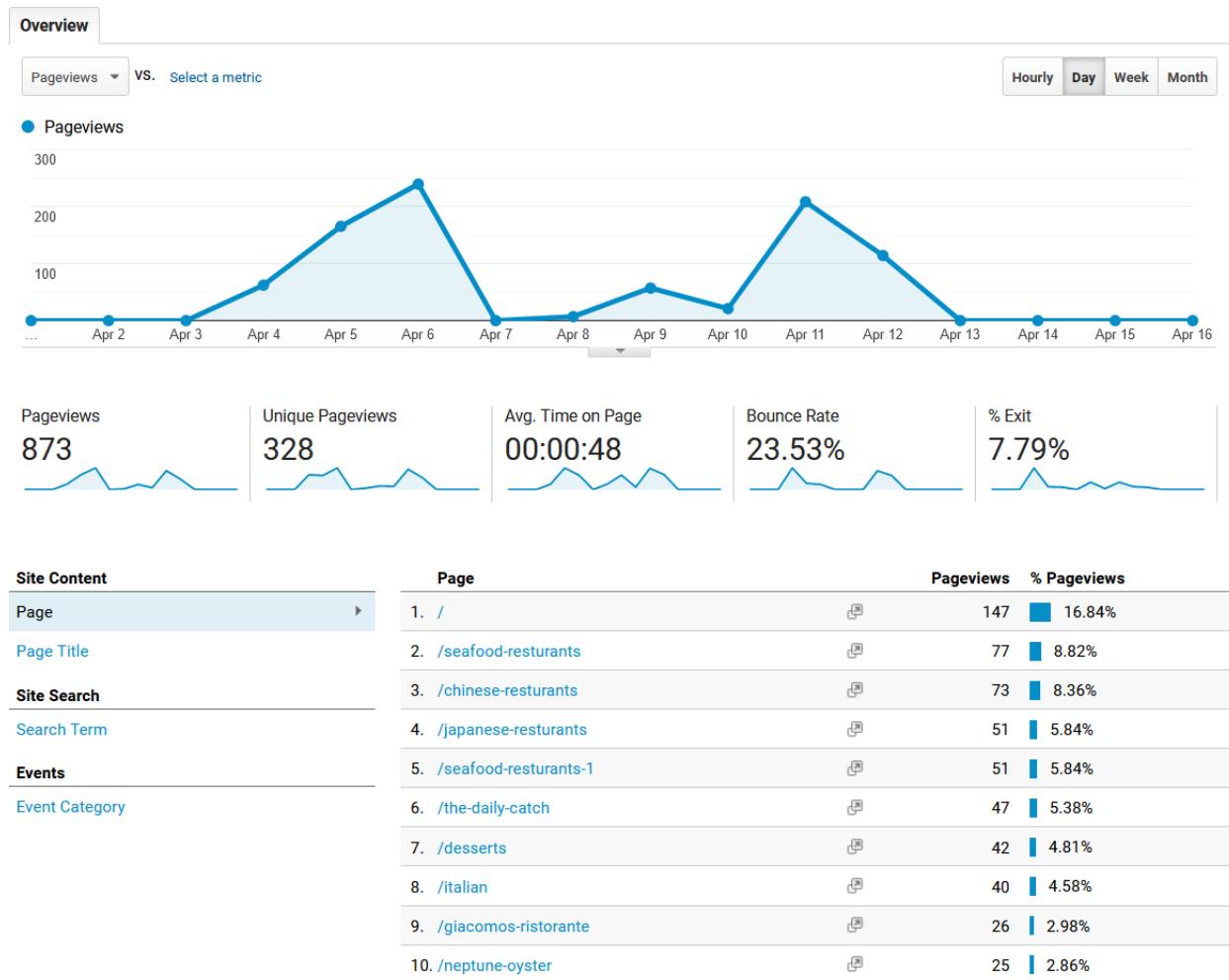


Figure 10

Behavior Overview - Average Time on Pages

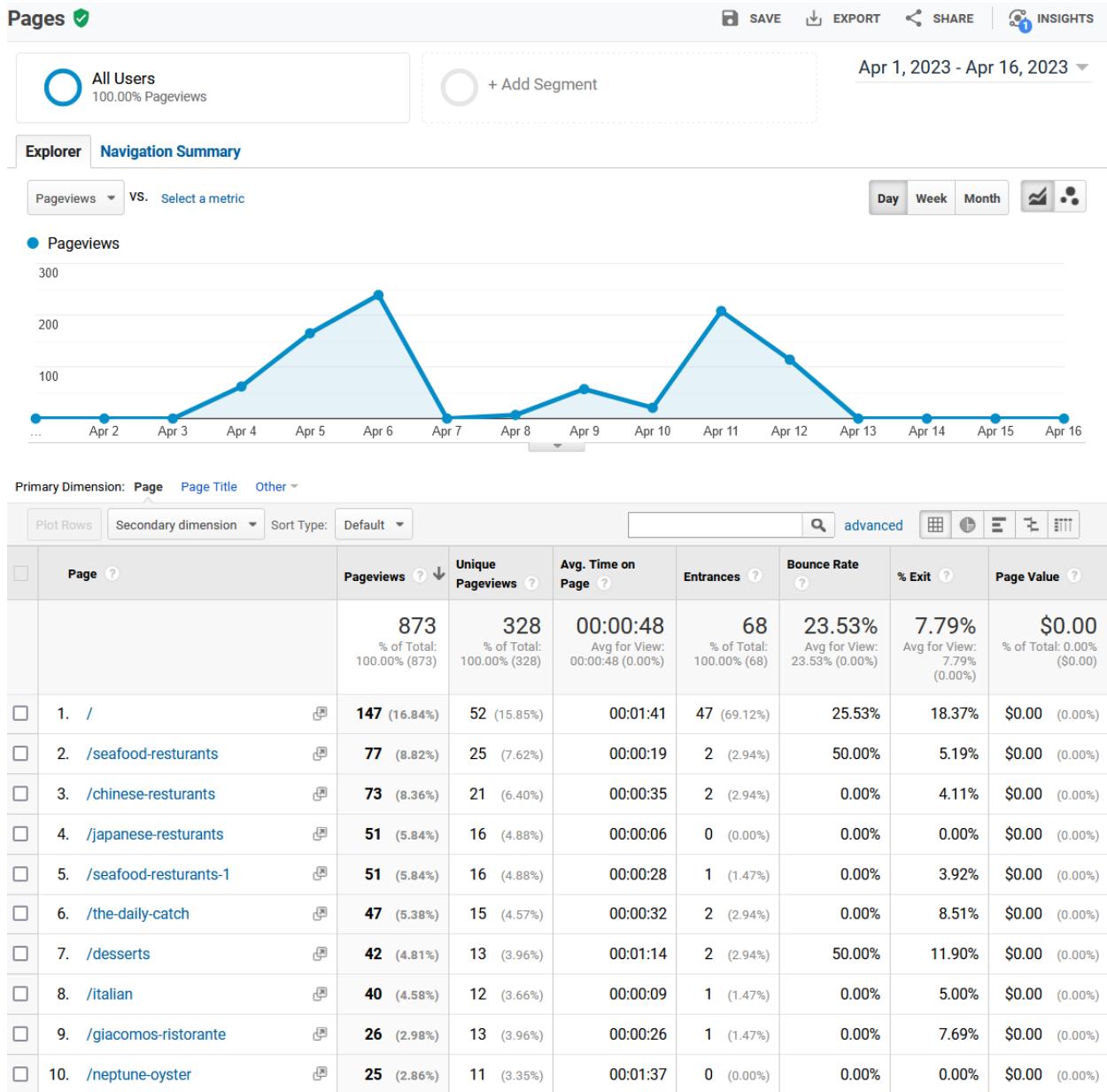


Figure 11

Behavior Overview - Exit Pages

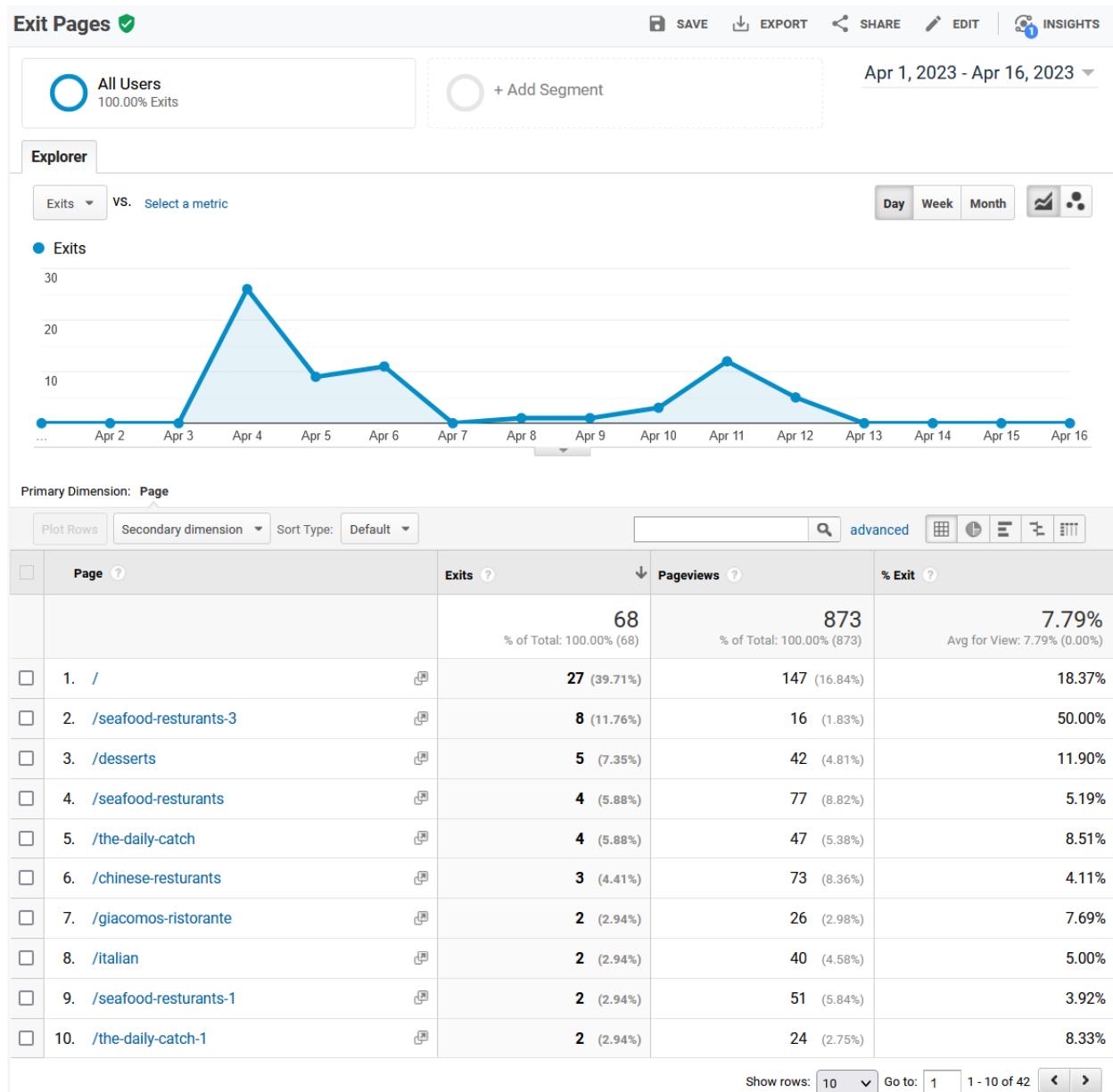
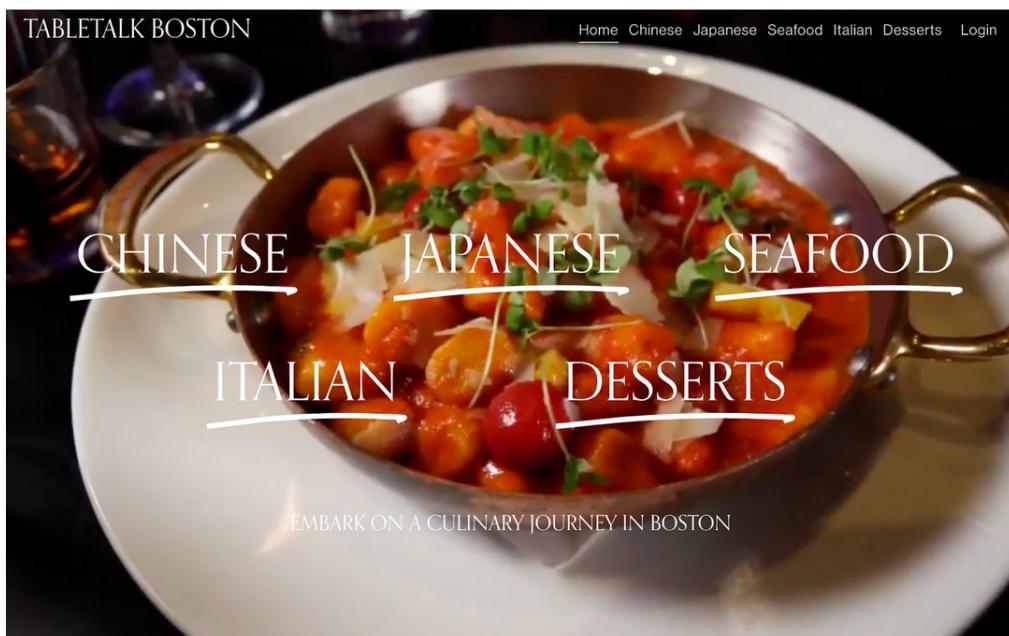


Figure 12

Experiment 1- Changing Homepage Font, Variant: Colorful Font

Original variant



Variant: Changing homepage front color

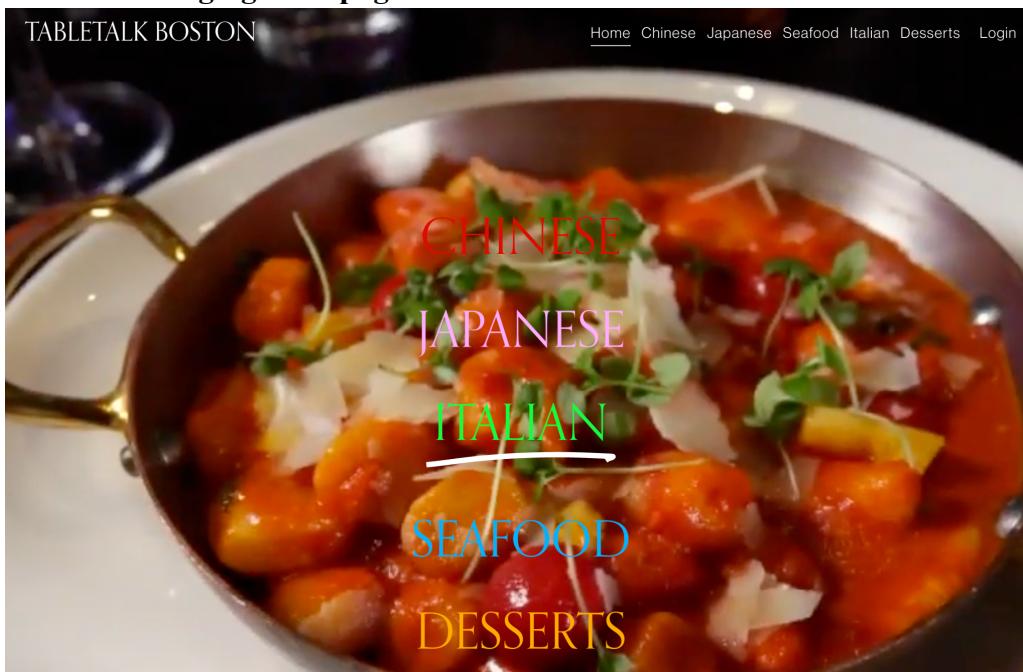


Figure 13

Experiment 1 Result from Google Optimize

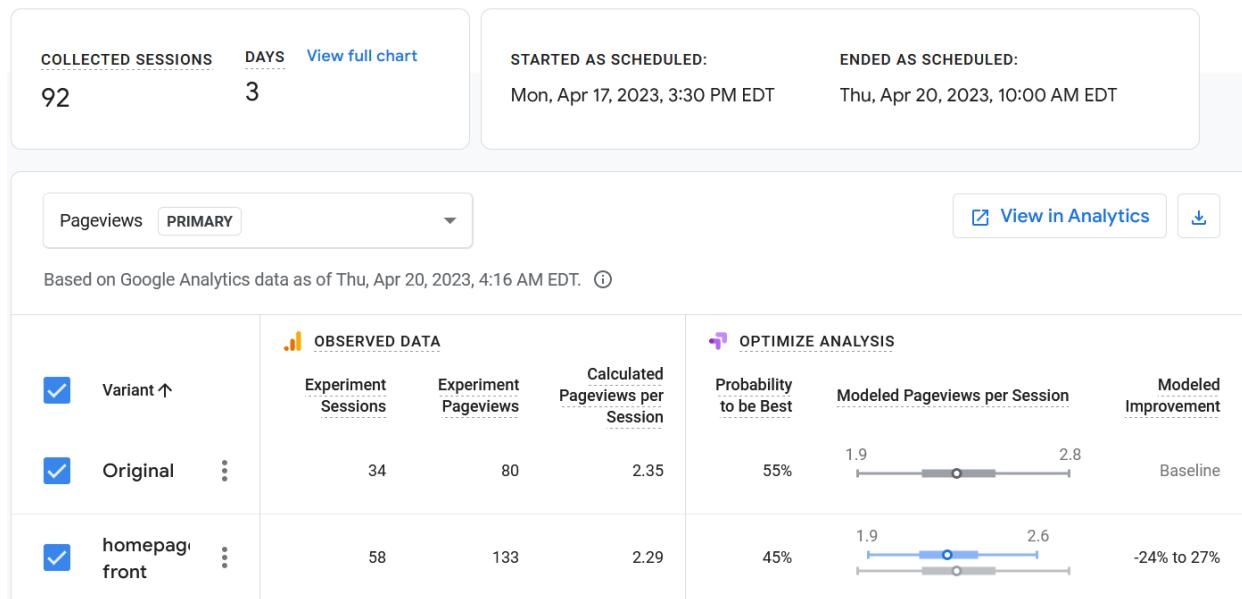


Figure 14

Experiment 2 - Homepage with Image Background, Variant: Statical Image



Figure 15

Session Duration Result of Image Background Experiment

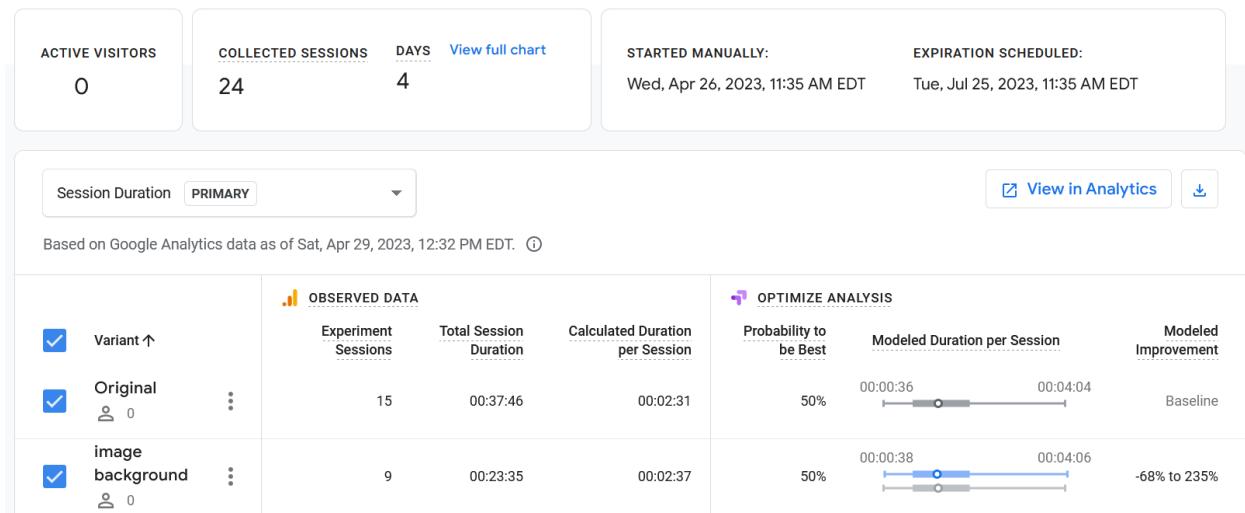


Figure 16

Bounce Rate Result of Image Background Experiment

