**Menu Design Shop Project Summary**

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**Project Description/ Guidelines:** During the course of our research looking into Menu Design Shop’s (MDS) Shopify.com analytics as well as information tracked through Google Analytics, we began to notice a specific pattern with regard to search queries. It seemed as though the vast majority of search queries Menu Design Shop appeared in, which resulted in a click to their website, were deliberate. What we mean by this is that the search queries indicated the searcher was aware of MDS specifically or were aware of a product/designer that was exclusive to MDS. The proportion of search queries that were deliberate account for 94% of the search queries resulting in at least 1-click vs those that were more generic at 6%. This led us to our Hypothesis:

**Hypothesis:** If the majority of current search queries are completed by customers that are aware of Menu Design Shop and its product line, then new customers ***are not*** organically finding MSD through search engines.

**Null Hypothesis:** If the majority of current search queries are not completed by customers that are aware of Menu Design Shop and its product line, then new customers ***are*** organically finding MSD through search engines.

We tested the hypothesis by separating the column from the search queries dataset that tracked the number of clicks, into two separate groups. The first group were search terms that were deliberate and the second were generic search terms. We defined deliberate search queries as those that contain some combination of the name of the business (Menu Design Shop), a specific product exclusively sold by the business, or the name of a designer that designs exclusively for the business.

The t-test compares the generic search terms (sample) against the complete list (population), the result is as follows:

The mean # of clicks generated by generic search queries is 1.2820512820512822.

The mean # of clicks generated by overall search queries is 4.086124401913875.

P-Value is 3.9855351096551076e-13.

The difference in sample means is significant, which allows us to reject the null hypothesis and confirm our hypothesis.

**Section 1. Market segmentation: What does our current Market look like?**

**We obtained the data from this section by accessing Excel and CSV files from Menu Design Shop’s Google Analytics account. We utilized Excel pivot tables and Python libraries like Pandas and Matplotlib, to analyze the data. The following are what we found:**

**1) Users by Age/Gender** – *(Users who have initiated at least one session during the date range. Learn more about how Analytics calculates the number of users)* -Looking at this data we found that with both males and females, the largest number of users fall in the 25-34 age group

**2) Sessions by Age/Gender** – *(Total number of Sessions within the date range. A session is the period time a user is actively engaged with your website, app, etc. All usage data (Screen Views, Events, Ecommerce, etc.) is associated with a session)* - Looking at this data we found that with both males and females, the largest number of sessions fall in the 25-34 age group.

**3) Transactions by Age/Gender** – *(Transactions is the total number of completed purchases on your site)* - Looking at this data we again found that the largest number of transactions are conducted by the 25-34 age groups with both males and females

**4) Revenue by Age/Gender** – *(The total revenue from web ecommerce or in-app transactions. Depending on your implementation, this can include tax and shipping)* - Looking at this data we see yet again that the majority of Revenues are generated by the 25-34 age groups with both males and females, with females being the vast majority

**\*\*We start to see something different in the next four segments\*\***

**5) Conversions by Age/Gender** – *(The percentage of sessions that resulted in an e-commerce transaction)* – This data shows us the highest conversion rates are among females in the 45-54 y/o age group and the male 55-64 y/o age group. Perhaps MDS should address this untapped market to increase current revenues.

**6) Bounce Rate by Age/Gender** – *(The percentage of single-page sessions in which there was no interaction with the page. A bounced session has a duration of 0 seconds)* – Not surprisingly we see our lowest bounce rates, with males, in the 25-34 y/o age group. What is surprising however is that the lowest bounce rate with females falls in the 18-24 y/o age group, with the female 25-34 y/o age group of coming in second?

**7) Pages/Session by Age/Gender** – *(Pages/Session (Average Page Depth) is the average number of pages viewed during a session. Repeated views of a single page are counted)* – In this data we see again that the leading age group is the 18-24 y/o females.

**8) Avg Session Duration by Age/Gender** – *(The average length of a Session. Numbers are in Seconds)* – In this data we see that although the group that spends the most amount of time on the site males between the age of 25-34, but it is our second-place demographic, 18-24 y/o females that seems significant. Although the number of users in this demographic is small, if we look at percentage of sessions that result in a transaction, we see that the difference is negligible (females 25-34: 0.95% & females 18-24: 0.82%)

**Take-Away from Section 1:**

- 25-34 year-olds lead in the number of **Users** visiting the site, **Sessions** initiated, **Transactions** conducted, and **Revenue** generated. This tells us that our current business is comprised of actions taken by this demographic.

-As far as gender demographics are concerned females lead males in **Number of Users** (4,802- 2,978), **Revenues** ($22,440.51- $11,518.25), **Conversion** rate (0.80% - 0.63%), **Number of Sessions** (7,545 - 4,589), and **Transactions** (56-30). In fact, the only categories males lead is **Avg Session Duration** (2.6 Minutes vs 2.4 Minutes), and Bounce rate (3.78% - 2.41%)

-Potential Target groups appear to be 18-24 year-old females as the statistics we reviewed earlier indicate an interest in Menu Design Shop’s product offerings.

**Section 2. What variables/factors are associated with a purchase/conversion?**

**When looking into the revenue channels we found that the following:**

**It is important to note that the amount of data we had available to us was limited to the past 2 months. The reason for this is that Menu Design Shop recently transferred their operations to a new online platform.**

Referral- $63,883.04- This channel reports sales data from customers “referred” to the new platform from the old platform.

Organic Search- $18,090.35- This is a bit misleading because Google defines an “Organic Search” as one that is not paid for by the business. What we found however, is that it was not truly organic as more than 94% of searchers deliberately searched for Menu Design Shop in some form. In essence using search engines as a “yellow pages” directory.

Direct $15,015.00

Email- $3,273.34- These are sales that came from email marketing campaigns

Paid Search- $3,253.81- These are sales that came from paid search campaigns

Social- $190.50- These are sales that came from Social Media outlets

**Take-Away from Section 2:**

-It seems like a majority of revenues are channeling in from Menu Design Shop’s old website

-Organic search seems robust, however as we will see in section 3 these searches are not as ‘Organic’ as we would hope

-Paid searches, email campaigns, and social media campaigns are not driving much revenue; these strategies may need to be revisited in the near future.