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Business Analysis – Matcha Café Maiko Tysons

# Abstract

## Objective

To present current and potential stakeholders a descriptive analysis that will help assess performance and growth based on 2019 – 2022 sales data.

## Methodology

Analyze the sales as well as the items that were sold to draw connections to the year, season, menu items, and regulars to help provide insight. Utilize the Analytics features on tableau to show trendlines and forecasts.

## Detailed Methodology

The data was downloaded by year from the SquareUp dashboard before being uploaded onto a local SQLite database via DBeaver. The data was relatively clean, save human error and inconsistencies. Excel was used to identify columns of interest before dropping unnecessary columns through SQL. Due to the excessive volume of the dataset, the data was further explored in Python through Spyder Anaconda.

After the data was queried data from Spyder Python, the next step was data cleansing. Null values were replaced with “N/A”. For numeric fields that were filled with “N/A”, value was changed to 0 using a mask. One entry for April 2020 was added to show that there were no transactions or cash flow that month. Older transaction data was modified to fit the updated menu and categorized items between hot, cold, and pastry. Formatted dataframe fields, initialized customer names for privacy, and exported to CSV. CVS was then used with SweetViz to get an EDA (Exploratory Data Analysis) overview and check for data quality. The resulting CSV was then loaded onto Tableau for visual analysis.

On Tableau, views were created to identify top sellers as well as quantify trends and growth. The views were then compiled onto dashboards and later a storyboard to present to current and potential stakeholders.

## Results

Overall findings show that there is a general upwards trend, however, gross sales have not yet recovered to pre-COVID- levels. This may be due to international travel restrictions lifting in 2021 as well as reduced hours due to COVID and staffing issues. Line graphs portray the impact COVID had on the business with a huge dip from March to June 2022, when COVID was peaking and stay at home orders began. Once Q4 2022 data is available, the project will be updated to reassess growth.

Pareto chart analysis shows that the items that contribute to 80% of our gross sales are soft-serves, matcha lattes, Maiko Specials, double fromage cheesecakes, and Basque burnt cheesecakes.

## Conclusions

Although Matcha Café Maiko Tysons enjoyed a prosperous beginning, it was soon put to a halt due to the COVID-19 pandemic. The gross sales volume portrays an overall positive trend indicating that sales will eventually recover and that the business is doing well despite setbacks.

# Data Source

## Data Collection Source

From the [SquareUp sales dashboard](https://squareup.com/dashboard/sales/transactions), exporting ‘Transactions CSV’ and ‘Items Detail CSV’. It is a compilation of sales data from the POS system(s) registered with the business.

* ‘Transactions CSV’ contains detailed payment method data for each transaction. 117,754 row count.
* ‘Items Details CSV’ contains data pertaining to the items sold. 148,994 row count.

## Findings

1. Data Size: Currently, the dataset totals to 266,748 rows and was reduced to 148,994 rows by an inner join. Data for Q4 2022 will be added when available.
2. Missing Values: There are missing # Customer Name and # Customer ID values. Through Python, I attempted to identify regular customers through name, id, and PAN.
3. Duplicates: On transactions with split payments, there are duplicates. Payment methods are not being analyzed so this does not pose an issue.
4. Dates: At the moment, the date range is from 2019 Q3 to 2022 Q3. I plan to manually update the data as each quarter passes. If time allows, I would like to explore the possibility of creating a script or AWS feature to automatically update the local SQLite database every night.
5. Additional Findings: On Festival days, Sakura Matsuri 2022 and Asian Collective Night Market 2022, the sales data was appended to the kiosk sales data. For the purpose of this Analysis, festival data will be excluded.

#### SQL or Python code is attached separately