COFFEE SHOP SALES DASHBOARD

IN EXCEL

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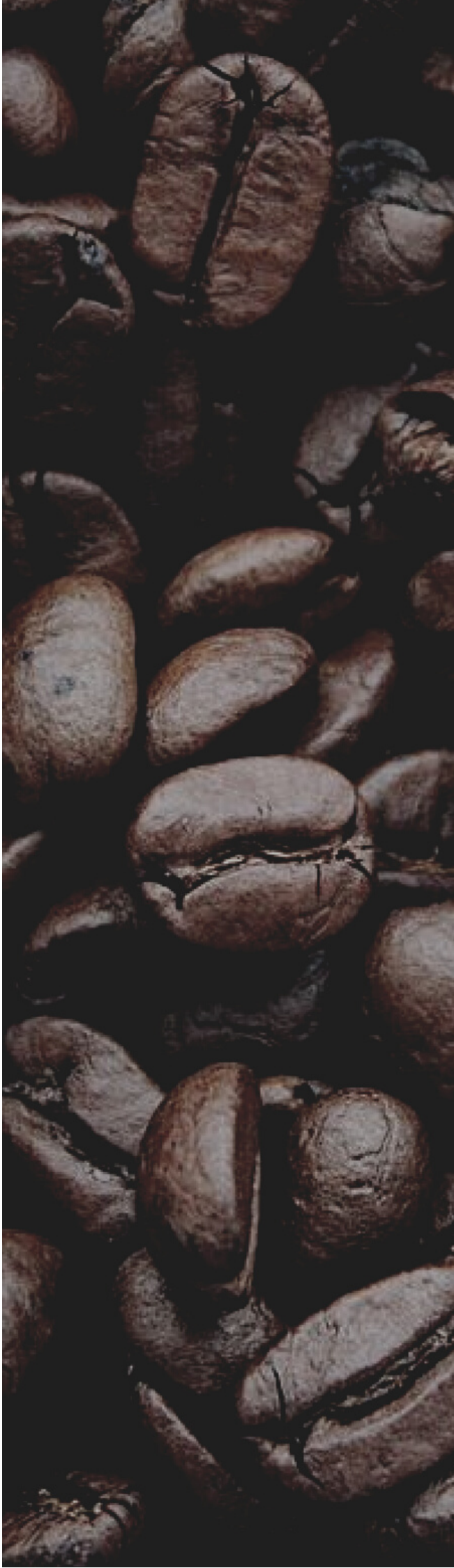
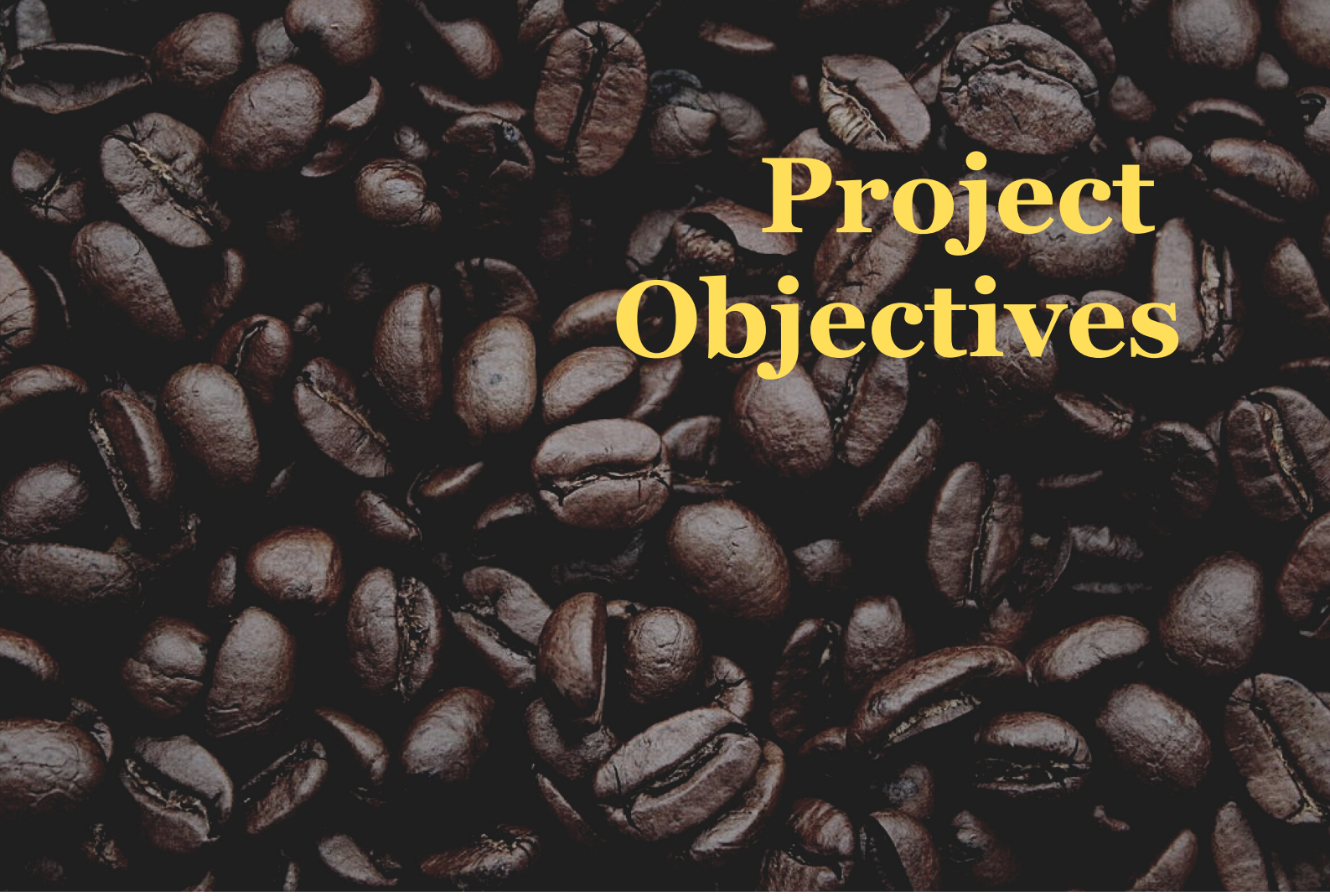
Project Brief

As the newly appointed franchise owner of Maven Roasters, a prominent coffee shop chain with three locations in New York City, the goal of enhancing understanding of purchase behavior and optimizing operational efficiency is pursued. To achieve this, transactional data from the first half of 2023 has been gathered.

Project Goals

The goal is to transform the collected transactional data from Maven Roasters into a dynamic and interactive dashboard that visually represents comprehensive data from the first half of 2023, in order to assist franchise owners in identifying patterns, trends, and opportunities for the business.





Project Objectives

Objectives:

- Profile and prepare the raw data for analysis
- Explore the data with Pivot Tables
- Build a dynamic dashboard to visualize patterns and trends

Objective ONE

PREPARE DATA FOR ANALYSIS

- The number of records in the dataset is **149,116**, and the number of fields is 11.
- Filters were added to the header rows to explore each field. Three store IDs that are mapped to respective store locations were discovered.
- Additionally, other product data, such as product categories, types, and details, along with product IDs mapped to unit prices, was found.
- Transaction dates were looked into, revealing dates ranging from January to June 2023.
- Upon reviewing the data, no instances of unwanted data, miscategorization, or duplicate data were found.
- A column was added to compute Revenue using the **PRODUCT** function.
- Using the **MONTH** and **WEEKDAY** functions, new columns were added to determine the Month and Day of the Week, producing numerical values in the process.
- To display the Month and Day of the Week as texts, the **TEXT** function was utilized.
- A new column was added to extract the Hour by using the **HOUR** function from the transaction time field.

Objective TWO

EXPLORE THE DATA WITH PIVOT TABLES

- The data was sliced and diced to analyze time series and trends at the product level.
- A Pivot Table was inserted to display **Total Revenue** by Month.
- Two new Pivot Tables were added to display the number of transactions by **Day of the Week** and **Hour**.
- Additionally, pivot tables were added to display the number of transactions by **Product Category** in descending order.
- To show the number of transactions and revenue by product type, pivot tables were added. The data was then filtered to the top 15 and sorted in descending order.

Objective THREE

BUILD A DYNAMIC DASHBOARD TO VISUALIZE
PATTERNS AND TRENDS

- The final objective was for the data to be visualized with Pivot Charts, an interactive dashboard to be designed, and insights and recommendations for the coffee shop to be identified.
- Pivot Charts were added to display Revenue by Month as a **Line Chart**, Transactions by Day of the Week and Hour of the Day as **Column Charts**, and Transactions by Product Category as a **Bar Chart.**
- The charts were assembled into a rough dashboard layout.
- And some space for the Pivot Table showing the Top 15 Product Types was included.
- A **slicer** for store location was added and connected to all of the PivotTables on the sheet.
- The dashboard was finalized by adjusting formatting, alignment, and polishing by removing the worksheet gridlines.

Insights & Recommendations

Insights:

- As the slicer is tested, the charts updating can be observed.
- Some interesting patterns in the charts can be seen by Day of the Week and Hour of the Day.
- In lower Manhattan, a huge spike is observed, which appears to be during the morning commute, specifically in the **7 to 10 am**.
- A major spike in sales is observed on **Monday**, and then towards the evening around 7 to 8 pm, not much product is being sold.
- According to product level trends, **espresso** seems to be very popular here in Manhattan, with coffee and tea being the top products.
- When compared with Astoria, **chai tea** is actually the most sold product, and again, coffee and tea are at the top of the list.
- The same heavy traffic on Monday is not quite seen in Astoria, and there's a pattern there, but not quite as extreme as in Manhattan.
- It looks like this location stays open till seven, and transactions stay pretty stable throughout the day, all the way down to closing time.

Recommendations:

- Maybe an improvement in sales margins can be achieved by changing the operating hours.