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***General overview of Microsoft Power BI:***

Microsoft Power BI is a data analytics tool used to provide business intelligence capabilities, including loading, modelling, and visualizing data sets. Its initial release was over 10 years ago in July 2011, and since then the Microsoft team has continued to add greater functionality and improve ease-of-use on a monthly basis.

The program itself can be used both on a local machine (via Power BI "Desktop") and also on the cloud (via Power BI "Services"). It can be used in a similar fashion as how one may use Excel, but also provides the greater ability to more easily create interactive visualizations called “dashboards”.

***Personal Finance PowerBI Dashboard:***

This is a project that utilizes Microsoft PowerBI to analyze personal financial data and visualize expenses through an interactive dashboard.

*"Data analysis is not just about presenting data, but to build a story and create a meaningful narrative from the raw data. At the end of the day, that's what analytics is all about - not about writing code, not about crunching numbers, not about memorizing formula syntax - it's about deriving meaning and context from the data and, more importantly, using it to make real change."*

*- Chris Dutton, Maven Analytics*

***Problem Description:***

As one should, I have been keeping track of all my daily spending using Microsoft Excel. Using basic sorting/filtering in Excel I'm able to see a very high-level overview of my spending. In order to perform data analysis at a deeper level, we will turn my static Excel data into dynamic PowerBI dashboards.

***Project Goals:***

In order to answer these questions, I invested time in planning the PowerBI measures I would need to create and also planned a rough outline of the dashboard visuals I wanted.

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| Monthly spending (in a given year) |
| How much money spent per item category |
| List all expenses with comments |
| How much money spent per location |
| The number of purchases in various price ranges |
| Quarterly and weekly spending information |
| Various average costs (per week, month, day) |
| Comparison of food costs to restaurant costs |
| Spending behavior when I'm sick |
| Comparison of weekday and weekend spending |

***Explanation of Project Files:***

Here is a brief description of each file/folder used for this project.

***Finance\_Data:***

This is the document that contains each month's Excel data in a separate Excel workbook. The dates (currently) range from Aug 2018 - Dec 2020.

***Finance\_Data.xlsx:***

This is a copy of the original Excel file that I was using to keep track of my spending.

***Personal\_Finance\_Dashboard.pbix:***

This is the main Power BI file containing the finance dashboards.

***Data Collection Methodology:***

I collected this data by keeping all purchase receipts and inputting the data manually into Excel. The information I kept track of was: Date, Item Category, Price, Location, Comment.

In order to import this data into PowerBI, it was quite the process. Since the data was contained in \*multiple Excel sheets in the same Excel workbook\*, I first had to separate the sheets into their own Excel workbook - this turned out to be the easiest avenue to importing the data.

***Conclusion:***

Using PowerBI I was able to visualize my purchases data in an interactive way. This allowed me to drill deeper into my spending behavior and with this information I can now be more conscientious of what I choose to spend my money on.