

Link to the website: <https://zhenghao104.github.io/>

Link to the PDF:

<https://github.com/zhenghao104/zhenghao104.github.io/blob/master/McDonald.pdf>

Link to the source code: <https://github.com/zhenghao104/zhenghao104.github.io>

Sources of reference:

- Plot line in line charts:
<https://stackoverflow.com/questions/21427943/how-to-draw-a-vertical-line-on-highcharts>
- Mcd theme: <https://codepen.io/priyanka-patange/pen/dWpaEG>

Writeup:

To get started, I load both of the csv file into pandas dataframe and explore around the axis and the field. Once I understand the different regions and food types, I started to process the data into the format I wanted. The code is in the jupyter notebook in the repo. I separated the data into food types and regions. I use both csv to analyze the trend for each month and each day to see whether the average sales rise or fall. I use pandas to compute the sum and average for the datapoint for the graph.

Once the data processing pipeline is ready, I started to port over the data to highcharts to plot line, bar and pie charts. I did some research to make the website theme fit with McDonald's common design. After plotting several graphs I wrote some words about my findings by comparing between different charts. I use VS Code live server to host my initial website and for debugging. Once the website is ready I uploaded the code into my GitHub repo and host the website using github.

Some pitfalls over the process is that using highcharts to customize to the way I wanted is challenging. Initially I was using the sum to analyze the sales trend of each day of the week and each month of the year. Then I realized this will give the wrong impression and some day of the week appear more frequently than another or some month of the week has less days than other months. It requires some thinking and constantly revising to make sure the graph I am generating did not take any false assumptions.

Overall I was able to visualize the sales trend micro, macro and geographically. The most important step in this project is to understand the data fully to avoid any mistakes or false assumptions. Having an interactive graph using highcharts can provide a great user experience to the user on the website. I was able to show that there are some fall on sales after the introduction of Burger King's impossible burger which is a great finding. However, I will leave it to the business operations to make a decision on the next step.