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| Data Visualisation 2 Report |
| By Ethan Ho Wye Kit (32930267) |

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| Visualisation URL: https://ehoo0018.github.io/FIT3179/ |

# Domain

The domain chosen for this assignment is **Restaurants**, in particular Michelin Awards. The Michelin Star is an award given to restaurants that offer world class dining experiences.

# Why

The Michelin Star is a prestigious award granted to restaurants that are of or set world class standards in the culinary space. The Michelin Guide is a guide book annually published by the company of the same name. It contains an index of restaurants and hotels that have been awarded up to 3 stars, each increasing star representing a level of excellence in dining experience. The guide was initially published as an incentive for tourist to travel through driving, subsequently using their automobiles more. As of today, the guide book lists establishments ranging across 3 continents. Through visualisations, we can see the spatial distribution of these awarded restaurants spanning multiple continents. Observations such as which country or continent has the greatest number of stars, the most expensive restaurants etc. can be made. Using the complimentary data provided in the dataset, we can also see the distribution of types of awards handed out as well as the general price range of Michelin starred establishments globally.

# Who

This visualisation is designed for travellers and food-lovers as the visualisation displays a record of highly reputable restaurants internationally, allowing them to plan their destinations, budgets, and expectations.

# What

The dataset (Kaggle, 2023) consists of records of Michelin-awarded restaurants globally including price ranges, award received, cuisine and country and city of origin. The dataset was constructed using a web scraping tool, namely Goang (Ng, 2023). Restaurant details were scraped from the Michelin guide on Google Maps and transposed into a dataset.

# Why and How

The first two charts used the same idiom – dot map. The dot map is used to show the spatial distribution of the restaurants within an area. Both visualisations using point marks to indicate the location of the establishment. Colour channels were also used to display the type of award given to the restaurant by the Michelin inspectors. I chose to use different projections for each visualisation as I wanted to provide both an overview and a zoom and filter emphasis visualisation separately. Tooltips were then used to provide details in-demand. This all was done to abide by Schneiderman’s mantra (hampdatavisualization, 2016).

The overview map (Figure 3) used an Equal Earth projection to display all the data points at once. I chose this projection as I wanted to display the entire world. The rotatable globe (Figure 3) used an orthographic projection, which allowed it to be rotated and zoomed in upon, while preserving all the points.

The first bar chart (Figure 4) is used to display the magnitude of restaurants per country. The second bar chart is used to display the magnitude of restaurants per award and per country (if selected). Both these charts utilise length to expressive the quantitative value and allocated one spatial region for each mark. Colour luminance is used for both charts to show the amounts for each category. In the first bar chart, a line mark was used to indicate the mean count of restaurants for all selected countries.

The last chart uses a donut chart idiom (Figure 5). The chart comprises of small multiples of the part-to-whole relationship between each type of Michelin award and its price ranges. An arc mark is used to showcase the magnitude of each price range within that award. Colour hues are used to differentiate between each price range.

# Design

## Layout

In terms of viewing path, I ensured that diagrams were placed in an order of relevance. The maps (Figure 3 and 4) were placed on top of the rest of the visualisations and took the centre position. This also helped place the charts in the visual centre as the maps are the focus of the visualisation. The rest of the visualisations were placed in their respective subsections, helping achieve balance. The alignment of these subsections was set to the centre to achieve symmetry and ensure that there was enough whitespace. Sightlines can be seen in the image below (Figure 2).

## Colour

For this visualisation, colour hue was most used colour space. Colour hue was applied for nominal values such as different types of Michelin Awards on the Map diagrams (Figure 3 and 4). On the other hand, colour luminance in the form of a sequential gradient was used to display the different magnitudes for the bar charts (Figure 4) as it showed quant values. It could be argued that colour luminance could be used again to display the magnitudes in the donut charts (Figure 5). However, to show a better display of the part-to-whole relationship by using colour hue to ensure readability.

## Figure-ground

Font size and styles are used to establish a visual hierarchy. Headers were bolded and enlarged compared to normal text. In addition, different tiers of headers had varying font-weight and size which increased proportionately to their hierarchy level. Besides that, important values in the normal text were bolded and coloured to place emphasis on them. Points on the map diagrams (Figure 3 and 4) were saturated and had thick strokes in contrast to the bright desaturated colours designated for the map area.

## Typography

For this visualisation, a non-standard typography (Work Sans) was used. I chose this typography as it conveyed a professional feel, which complimented the domain chosen. The font had a San-serif typeface which was highly suitable monitors and charts, improving the overall readability.

## Storytelling

This visualisation follows the annotated chart narrative. Text providing context and insights are placed closely to their respective idioms within the subsection. This follows Gestalts principle of proximity.

As stated, the subsections were placed in vertical fashion, eliciting an eye movement from top to bottom. Text position within each subsection also abides by movement, occasionally aligning left to compliment the natural movement of left to right reading (Figure 4).

# Bibliography

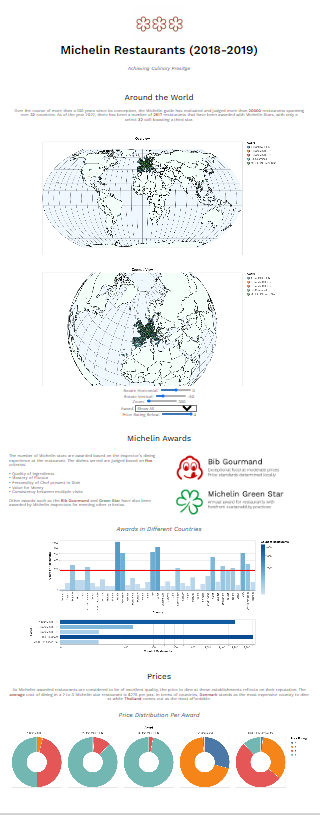


Figure 1: Page View

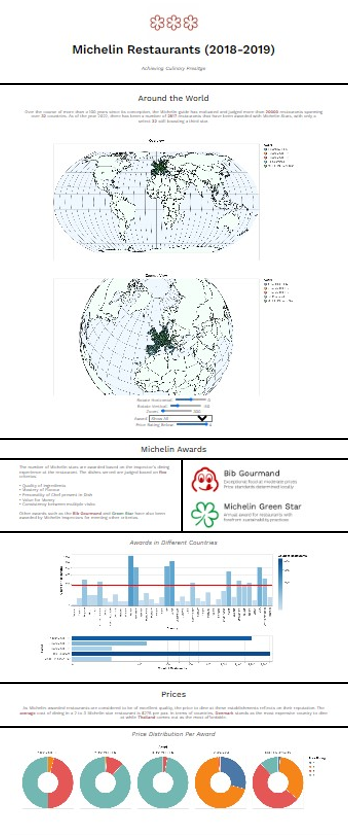


Figure 2: Sightlines in Page

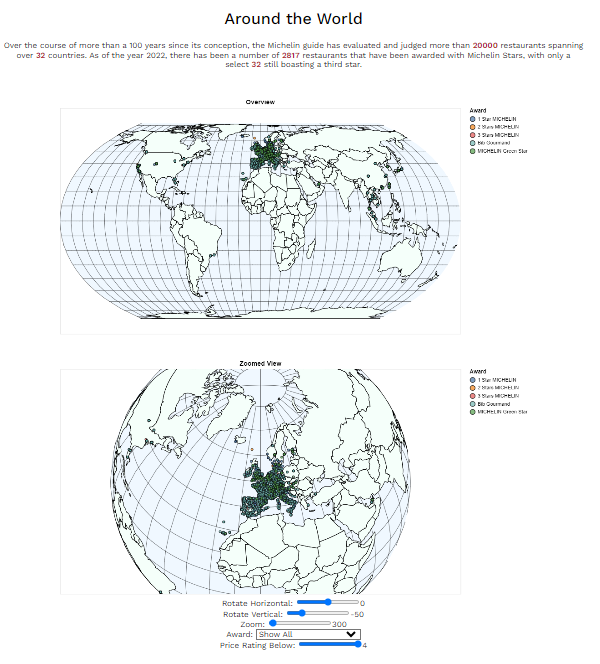


Figure 3: Map Charts

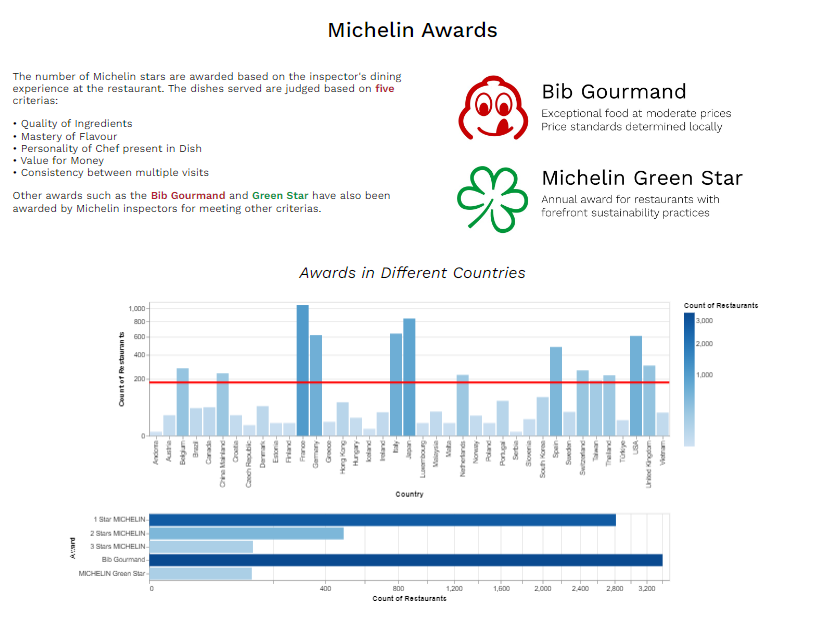


Figure 4: Bar Charts

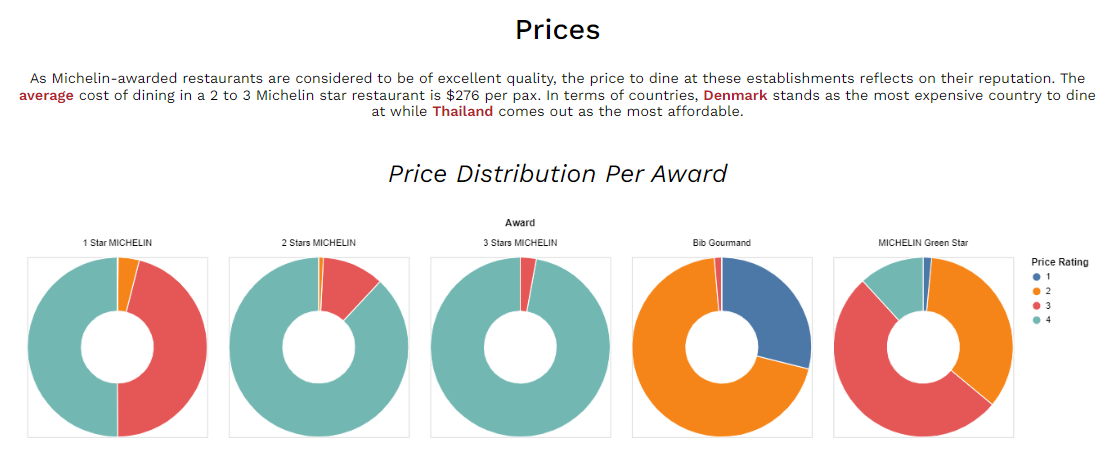


Figure 5: Small Multiple Pie Charts

# References

*Michelin Guide Restaurants*. (n.d.). Www.kaggle.com. <https://www.kaggle.com/datasets/ngshiheng/michelin-guide-restaurants-2021>

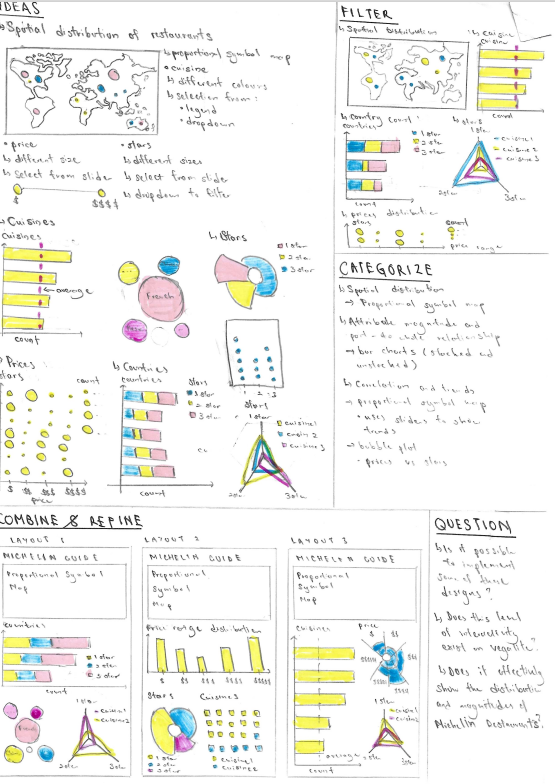
Ng, J. (2022, March 21). How I Scraped Michelin Guide Using Golang [Review of *How I Scraped Michelin Guide Using Golang*]. *How I Scraped Michelin Guide Using Golang*. <https://jerrynsh.com/how-i-scraped-michelin-guide-using-golang/>

hampdatavisualization. (2016, February 26). *Schneiderman’s Mantra*. Data Visualization. <https://hampdatavisualization.wordpress.com/2016/02/26/schneidermans-mantra/>

# Appendix

Contains 5 pages for the Five Design Sheet

## Page 1



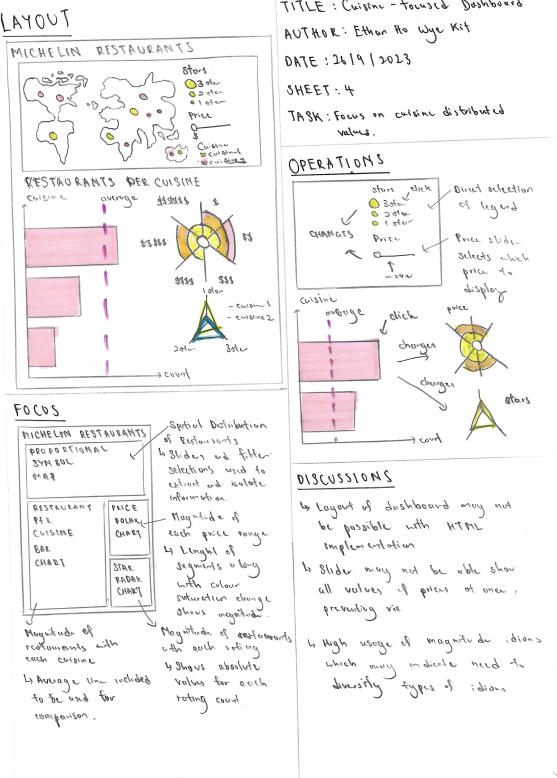
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