CM50266 Applied Data Science

Lab 1: Weather Visualisation

For task 2, I would explain the various charts which apply to the two infographics. One is Winterbourne's monthly weather condition, and another is Winterbourne's seasonal weather condition. Moreover, I would give the reason for choosing appropriate colors and chart effectively and why I bring some components from provided weather data to show up in these infographics according to Mackinlay's ranking rule.

The first infographic, Winterbourne's monthly weather condition, consists of two same style charts, which are bar charts joined with a line chart to display average temperature and humidity in each month, including another same style chart between rainfall and barometric pressure. I choose a bar chart because it can convey a quantitative value that has different categories, such as the month, simply. Significantly, the data is not too complicated to apply with an advanced chart. The way I choose the components are based on the correlation between variables from task 1. I decide to display temperature outdoor and indoor together because these variables have a robust positive correlation that seems to have an exact pattern during the timeline. Both are the same type of variable as temperature. By getting the advantage from the previous reason, I choose another variable that correlates with temperature to plot the same graph. Therefore, I prefer the humidity, which explains with a line chart. I changed how to explain humidity with a line chart because the correlation between temperature and humidity correlates much less than outdoor and indoor temperature, which would be easier to see in the picture and not make reader get confused. For another chart, rainfall and barometric pressure have a negative correlation. I create the same style chart as above because these variables do not have a strong correlation enough to show in the same type of chart. In my opinion, it would be easier to see from the overview by bar chart for rainfall because the amount more fluctuates and line chart for barometric pressure.

The second infographic, Winterbourne's seasonal weather condition, contains two different charts: a line chart and a pie chart. For the first chart, I use a line chart with fill color between the temperature range for indoor and outdoor temperature separately. In my mind, this chart would clearly show the content between maximum and minimum values, including the trend in upward and downward in each season as well. For the second chart, I made a pie chart to the average amount of rainfall in each season and denoted the values by a percentage because the audience can translate the chance of rain in each season.

For the colour I use in the monthly's infographic, I use red and orange to make the audience think about robust and hot. Then use the navy to convey the feeling of wetness to explain humidity. For another chart, I choose blue to describe the amount of rainfall with the same feeling as humidity and brown indicate the pressure to contrast feeling with blue from rains. For another infographic, I use red and orange to explain temperature for the same reason as mentioned. Finally, I bring red to indicate summer because Red is the warmest and most dynamic colour. Green to tell spring because green refers to the shade of leave and trees in this season. Blue indicate winter because the audience can imagine the cold feeling and wetness.
Brown to show autumn because it refers to the shade of colour the leave falls in this season.

The end of both infographics shows three important pieces of information that tourists usually expect to know when they plan to travel. I mention which month or season are hottest, coldest, and the most average amount of rain. I create these components because when people want to know the condition of the weather, they usually focus on these three things to prepare themselves for daily life.