1. What is the mean Daily Rainfall Total (mm) in Admiralty for the past 2 years?

**6.26 mm**

Use the command **=MEAN(E2:E732)**

Null values are ignored instead of being considered as zero.

2. What is the median Daily Rainfall Total (mm) across all 8 weather stations in Singapore for the past 2 years?

**0.2 mm**

Use the command **=MEDIAN(E2:E5848)**

3. Compare the Maximum Temperature (°C) in the year 2020 and the year 2021.

First of all, group the data by years (2020 and 2021) by sorting the “Year” column.

Then, plot a bar chart of the data.

Average of Maximum Temperature (°C) in the year 2020: **31.76**

Average of Maximum Temperature (°C) in the year 2021: **31.70**

Median of Maximum Temperature (°C) in the year 2020: **32**

Median of Maximum Temperature (°C) in the year 2021: **32**

The Maximum Temperature (°C) in the year 2020 and the year 2021 exhibits a strong correlation. On average, the Maximum Temperature (°C) in the year 2020 is slightly higher than that of the year 2021.

4. How volatile is the Mean Wind Speed (km/h) compared to Max Wind Speed (km/h) in Tuas South?

Standard deviation of Mean Wind Speed (km/h): **3.86**

Standard deviation of Max Wind Speed (km/h): **9.68**

Therefore, Mean Wind Speed (km/h) is less volatile compared to Max Wind Speed (km/h) in Tuas South.

5. Show some of the relationships between the variables in this dataset by plotting graphs.

Sort the table by increasing mean temperature. Interestingly, the mean temperature forms a sigmoid curve. A somewhat negative correlation can be found between Mean Wind Speed (km/h) and Mean Temperature (°C).

Another negative correlation, which is more obvious, is shown when we plot the chart of Mean Rainfall (mm) Increasing Mean Temperature (°C).

In fact, a correlation matrix can be plotted to help us understand te relationship between the measured variables.

