Old Faithful Data – Analysis Using Google Sheets

You have been hired by the US National Parks to analyze the eruptions of the Geyser "Old Faithful" in Yellow Stone National Park. You want to be able to predict when the next eruption will occur. Rangers will want to know this because tourists want to know.

Open "Old Faithful Data" from my website. Make a **Copy of the Google Sheet and save it** in your MDM4U folder.

"Number" simply orders the eruptions.
"Duration" is the length of the eruption in minutes.
"Wait_Time" is the time until the next eruption.
"Previous_Wait_Time" is the time from the previous eruption until the current eruption.

Complete the following using Google Sheets and then collect all information in a Google Doc called Old Faithful-YOURNAME and share it with me:

1. Analyze the variables individually. (Wait_Time and Previous_Wait_Time are the same variable. Analyze Wait_Time)
    - Make a histogram for each.
    - Calculate Mean, Median, mode, Standard Deviation, Q1, Q2, Q3, IQR,...
2. Describe each variable separately in words.
3. Consider various scatter plots with lines of best fit.
    - Is there a relationship?
    - Explain the meaning of slopes, y-intercepts.
    - Describe any patterns you see.
4. Come to a conclusion. What is the best way to predict the wait-time to the next eruption?

<u>See below for video tutorials for Google Spreadsheets:</u>

Make a Histogram - https://www.youtube.com/watch?v=RQVbVa3ZLSQ

Make a Box and Whisker Plot – https://www.youtube.com/watch?v=jRzURMGYj5Q

Calculate 1Variable Stats - https://www.youtube.com/watch?v=xLQgIYe5Dss