**Module 11 Challenge – Web-scraping Analysis**

1. **How many months exist on Mars:**

There are 12 months that exist on Mars based on the dataset

1. **How many Martian (and not Earth) days worth of data exist in the scraped dataset?**

There is 1867 days worth of data that exist in the scraped dataset from the Mars Temperature Data site

1. **What are the coldest and the warmest months on Mars (at the location of Curiosity)? To answer this question:**
   * Find the average the minimum daily temperature for all of the months.
   * Plot the results as a bar chart.

On average, the third month has the coldest minimum temperature on Mars, and the eighth month is the warmest. But it is always very cold there in human terms!

A table with numbers and a red line

Description automatically generatedA graph of a temperature

Description automatically generated with medium confidence

1. **Which months have the lowest and the highest atmospheric pressure on Mars? To answer this question:**
   * Find the average the daily atmospheric pressure of all the months.
   * Plot the results as a bar chart.

Atmospheric pressure is, on average, lowest in the sixth month and highest in the ninth.

**A graph of a graph showing the average pressure by month

Description automatically generated**A screenshot of a cell phone

Description automatically generated

1. **About how many terrestrial (Earth) days exist in a Martian year? To answer this question:**
   * Consider how many days elapse on Earth in the time that Mars circles the Sun once.
   * Visually estimate the result by plotting the daily minimum temperature.

By using the number of days between peaks to calculate number of earth days in a Martian year it can be found that the distance from peak to peak is roughly 1425-750, or 675 days. A year on Mars appears to be about 675 days from the plot.

Internet search confirms that a Mars year is equivalent to 687 earth days.

A graph of a number of terrestrial days

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