1. Overview of Analysis

The purpose of the Surfs Up challenge is to use Python, Pandas, and SQLAlchemy in order to write a report that describes the temperatures on Oahu for the month of June and the month of December. This report will be utilized in order to determine the profitability of the surf season and whether ice cream sales share any correlation and to determine whether the business can remain sustainable year round. The method in this analysis required the date column in the measurements table of the Hawaii.sqlite database to be filtered on the month. A new dataframe is then created to hold the new data for summary statistics calculations.

1. Results

June:

* Count – 1700
* Mean- 74.94
* Standard deviation- 3.26
* Min- 64
* 25%- 73
* 50%-75
* 75%- 77
* Max- 85

Table

Description automatically generated

December:

* Count- 1517
* Mean- 71.04
* Standard Deviation- 3.75
* Min- 56
* 25% - 69
* 50%- 71
* 75%- 74
* Max- 83

Table

Description automatically generated

1. Summary:

The analysis indicates that the standard deviation of temperatures in December is greater than that of June meaning the temperature fluctuates more during that month. One query we could look at would consider precipitation values to determine which locations are more hospitable for an ice cream business. Additionally, we could look at the standard deviation of each specific location during a particular month to determine which locations are more sustainable for a business. Thus, the lower the standard deviation would indicate a location experiences more stable temperatures which would likely increase ice cream sales because of the more moderate temperatures.