

Assignment 5 - Data Acquisition, Cleaning, Organizing, and Exploring

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This is the final project for the TidyVerse section of the course. There are two parts which will be discussed in class.

Please keep in mind that the purpose of this assignment is for you to exercise, extend, and demonstrate your ability to use the ideas and tools of the Tidyverse.

Part 1 (50%)

Find NOAA Weather Station 46035 at 57.026 N 177.738 W. This station is buoy you can access through the NOAA National Data Buoy Center.

Read, Clean, and organize the data to produce a time series composed of 30 years of **daily air and sea temperature data** recorded **at noon** for the time zone of Station 46035.

Visualize and explore the data. Has the mean temperature changed over the past 30 years? You have taken only one sample per day. Has your sampling affected your evaluation of mean temperatures?

Part 2 (50%)

The attached file was created using the USDA QuickStats system using the following parameters

- Program: Survey
- Sector: Environmental
- Group: Vegetables
- Commodity: Vegetables Totals, Vegetables Other, Broccoli, Brussels Sprouts, Cauliflower

All other parameters were left open.

The data was collected to gain insight about chemical treatments applied to food crops as fertilizer, insecticides, etc. Clean, visualize, explore the data. How much can you say about the treatments reported in the data?