

Assignment GEO1: Blindern Temperatures

Due Date: October 27, 2023 at 17:00

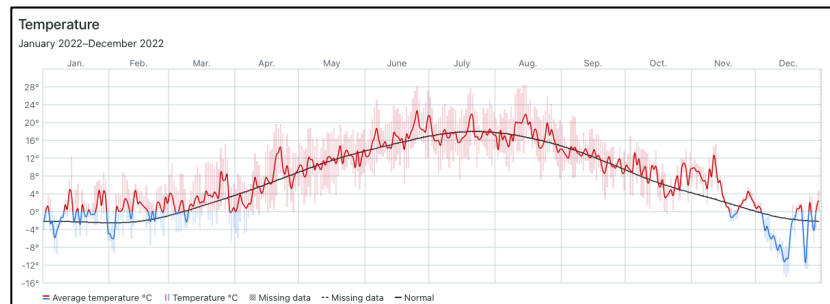
In this assignment we will use python programming (specifically: Pandas and the Jupyter Hub) to analyze temperature data for Blindern. We will plot it and do some simple analysis of it. Our goals for this assignment are:

- A. Write a python code on the Jupyter Hub.
- B. Use the Pandas library to import temperature data for Blindern for the past year.
- C. Plot temperature vs. time for the past year.
- D. Find which days had the minimum and maximum temperature during the past year.

Use a Jupyter Notebook to present your results. The notebook should include working python code that generates figures and output. Your code should be appropriately commented and your figures should have appropriate labels (including units). The notebook should also include a short discussion of the results: How did you achieve the goals described above?

1. Weather data for locations around Norway are available from: <https://seklima.met.no>

I have downloaded temperature data for Blindern station for 2022 (01.01.22 to 31.12.22). This same data is used by yr.no to make temperature history plots like the one shown here for 2022. The data for 2022 is available on class Canvas site as a csv file (Blindern_2022.csv).



→ Create a Jupyter Notebook that imports the temperature data into a Pandas dataframe.

2. Now plot this temperature data for the past year.
→ Plot minimum, mean, and maximum temperatures as a function of day of the year (0 to 364) using different colors.
3. Now we can look at the data more closely to ask questions such as:
→ What was the minimum, maximum, and mean temperature for the entire year of 2022?

Bonus Questions (these are for practice and will not be graded)

B1. Which dates in 2022 had the maximum and minimum temperature? Which date had mean temperature closest to the year's mean (which you computed in question 3).

B2. The temperature range for a day is difference between maximum and minimum temperature. Plot the temperature range as a function of day of the year. Are temperature ranges larger in the summer or the winter? Why?