

HWK1 Date: 20230909



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AS7501, 2023 Fall
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The website <https://climatologia.meteochile.gob.cl> provides means to access logged environmental data from several weather stations in Chile. For question 1 you will analyze previously downloaded data from that website. For Q2 you will select, download, and use data you deem necessary. Instructions for creating an account and querying the website are provided in u-cursos. Should you encounter any difficulty in accessing the data, we expect you to promptly ask in the forum.

First make sure you get the `HWK1-Howrareistherain.ipynb` from the github repository, along with the `data/*.csv` files.

- 1 You have access to four different timestamped relative humidity series (HR). These are taken from 4 stations. Our hypothesis is that these represent distinct climate regions, and that we can identify these regions only by looking at their HR distribution. You are expected to **characterize** this distribution for each station.

In the sample code the data is separated into months. You are encouraged to make your characterization as complicated or simple as you need in order to identify each region.

The stations are: El Colorado (330077), La Serena (290004), Calama (220002), and Tobalaba (330019).

You are expected to:

1. Characterize each HR distribution, trying to encode it in the fewest parameters possible
 2. Select and download enough data from a different station, similar in climate to any of these 4, and attempt at identifying which one of the 4 it most resembles. You will have to create a user account following the instructions by the teaching assistant in ucursos.
- 2 For this part you are expected to download rainfall data from whatever station you choose that suffered heavy rainfall in the 22-26 of June, 2023.
 1. Provide statistical information about the event.
 2. How much of a deviation is this event from the typical rainfall for that particular station.