

Optional PS: File Formats

August 18, 2023

Download `hurricane_data_after2000.csv` from class GitHub into the same folder where you plan to write code.

1. Read the hurricane data into a Pandas dataframe.
2. Make `ISO_TIME` the index on your dataframe
3. Find the unique values of the `BASIN`, `SUBBASIN`, and `NATURE` columns.
4. Rename the `WMO_WIND` and `WMO_PRES` columns to `WIND` and `PRES`.
5. Get the 10 largest rows in the dataset by `WIND`.
6. Group the data on `SID` and get the 10 largest hurricanes by `WIND`.
7. Make a bar chart of the wind speed of the 20 strongest-wind hurricanes.
8. Plot the count of all datapoints by Basin
9. Plot the count of unique hurricanes by Basin.
10. Make a [hexbin](#) of the location of datapoints in Latitude and Longitude.
11. Plot the count of all datapoints per year as a timeseries using `resample`
12. Calculate the climatology of datapoint counts as a function of `dayofyear`