Climate’s brew: Codebook

# Daily Temperature of Major Cities

* Data source: [Kaggle](https://www.kaggle.com/datasets/sudalairajkumar/daily-temperature-of-major-cities/data)
* Data provider: [Sudalai Rajkumar](https://www.kaggle.com/sudalairajkumar)
* Original data collectors: [University of Dayton](https://udayton.edu/)
* Data size: 140.6 MB

# Coffee Dataset

* Data source: [Kaggle](https://www.kaggle.com/datasets/michals22/coffee-dataset)
* Data provider: [Michał Sikora](https://www.kaggle.com/michals22)
* Original data collectors: [International Coffee Organization](https://icocoffee.org/)
* Data size: 83.65 kB

# Coffee Review

* Data source: [Kaggle](https://www.kaggle.com/datasets/hanifalirsyad/coffee-scrap-coffeereview/versions/2?select=coffee_df_with_type_and_region.csv)
* Data provider: [Hanif Al Irsyad](https://www.kaggle.com/hanifalirsyad)
* Original data collectors: [Coffee Review](https://www.coffeereview.com/)
* Data size: 5.9 MB

For this research, I will mainly use 3 data sets: the Daily Temperature of Major Cities will provide me with information about temperature conditions in major cities around the world over time, allowing me to filter out areas where coffee is grown; Coffee Dataset gives me coffee economic indicators, from which I can find the major coffee producing and exporting countries in the world; and Coffee Review provides me with additional information regarding the taste and price of coffee, enabling me to assess the overall output quality of the coffee production process.

This analysis aims to explore the correlation between temperature in coffee-producing countries, explaining the influence of temperature on coffee output and quality in various nations, particularly those with substantial coffee exports. In addition to understanding the impact of climate, this research also delves into coffee roasting methods and their effects on the price and taste of coffee. From that, we can see how much coffee is produced, exported, imported, and consumed in some countries.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column Name** | **Variable Definition** | **Units** | **Data Type** | **Variable Codes** | **Missing Value Codes** |
| city\_temperature.csv | | | | | |
| Region | Region of the observation |  | chr |  |  |
| Country | Country of the observation |  | chr |  |  |
| State | State of the observation |  | chr |  | blank |
| City | City of the observation |  | chr |  |  |
| Month | Month of the observation |  | int |  |  |
| Day | Day of the observation |  | int |  | 0 |
| Year | Year of the observation |  | int | 1995 - 2020 | 200, 201 |
| AvgTemperature | The average temperature | F | num |  | -99 |
| coffee\_df\_with\_type\_and\_region.csv | | | | | |
| rating | Rating of the coffee |  | int |  |  |
| roaster | Roaster of the coffee |  | chr |  |  |
| name | Name of the coffee |  | chr |  |  |
| region | Coffee region |  | int | 0 or 1  africa\_arabia  caribbean  central\_america  region\_hawaii  asia\_pacific  south\_america |  |
| type | Type of coffee |  | int | 0 or 1  espresso  organic  fair\_trade  decaffeinated  best\_value  pod\_capsule  blend  estate  peaberry  aged |  |
| location | Coffee location |  | chr |  |  |
| origin | Coffee origin |  | chr |  |  |
| roast | Coffee roast level |  | chr |  | NA |
| est\_price | Estimated price |  | chr |  |  |
| review\_date | Reviewed date |  | chr |  |  |
| agtron | Coffee agtron value |  | chr |  |  |
| aroma | Coffee aroma scores |  | int | 0 - 10 | NA |
| acid | Coffee acid scores |  | int | 0 - 10 | NA |
| body | Coffee body (mouthfeel) scores |  | int | 0 - 10 | NA |
| flavor | Coffee flavor scores |  | int | 0 - 10 | NA |
| aftertaste | Coffee after taste scores |  | int | 0 - 10 | NA |
| with\_milk | Coffee with milk scores |  | int | 0 - 10 | NA |
| desc\_1, desc\_2, desc\_3 | Descriptions of coffee |  | chr |  |  |
| Coffee Dataset Included Coffee\_domestic\_consumption.csv, Coffee\_export.csv, Coffee\_import.csv, Coffee\_importers\_consumption.csv, Coffee\_production.csv, merged. | | | | | |
| Country | Country name |  | chr |  |  |
| Coffee.type | Coffee production/export type |  | chr |  |  |
| year | Observation year |  | num | 1990 - 2019 |  |
| production | Production in observed year | Kg | num |  |  |
| export | Export in the observed year | Kg | num |  |  |
| domestic\_consumption | Domestic consumption in the observed year | Kg | num |  |  |
| Total\_production | Total production from 1990 - 2019 | Kg | num |  |  |
| Total\_export | Total export from 1990 - 2019 | Kg | num |  |  |
| Total\_domestic\_consumption | Total domestic consumption from 1990 - 2019 | Kg | num |  |  |
| import | Import in the observed year | Kg | num |  |  |
| import\_consumption | Import consumption in the observed year | Kg | num |  |  |
| Total\_import | Total import from 1990 - 2019 | Kg | num |  |  |
| Total\_import\_consumption | Total import consumption from 1990 - 2019 | Kg | num |  |  |