

How the Niño phenomena affect the weather in Valledupar City in Colombia

Enviado el 24 de julio de 2021

CUADRO DE AVISO

From time to time, Dr. Chris Brooks may want to share your work anonymously (via social media channels such as Twitter), to highlight some of the accomplishments of learners in this course.

If you agree that you are comfortable with instructor sharing your Assignment #4 as an example of great work, please type YES in the text box.

YES

CUADRO DE AVISO

State the region and the domain category that your data sets are about (e.g., Chaohu, China and sports or athletics).

Valledupar, Colombia and weather phenomena

RÚBRICA

Has the learner identified the region and the domain category that their data sets are about (e.g., Chaohu, China and sports or athletics)?

☐ 0 puntos
The learner did not identify the region and domain category that their data sets are about.

☒ **2 puntos**
The learner identified the region and domain category that their data sets are about.



CUADRO DE AVISO

Create a research question about the domain category and region that you identified.

How the Niño phenomena affect the weather, in specific the temperature and the rain in the city of Valledupar in Colombia?

RÚBRICA

Has the learner stated a research question about the domain category and region that they identified?

- ☐ 0 puntos
The learner did not state a research question that related to the domain category and region they identified.

- ☒ 2 puntos
The learner did state a research question that related to the domain category and region they identified.



CUADRO DE AVISO

Provide at least two links to publicly accessible datasets. These could be links to files such as CSV or Excel files, or links to websites which might have data in tabular form, such as Wikipedia pages.

<http://dhime.ideam.gov.co/atencionciudadano/>

[Climate Prediction Center - ONI \(noaa.gov\)](#)

RÚBRICA

Has the learner provided at least two links to available datasets? These could be links to files such as CSV or Excel files, or links to websites which might have data in tabular form, such as Wikipedia pages.

☐ 0 puntos
The learner did not provide at least two working links to publicly available data sets (including links to CSV or Excel files).

☒ **2 puntos**
The learner did provide links to at least two working links to publicly available data sets (including links to CSV or Excel files).



If you would like to provide feedback on the links, please do so here.



very good



great.



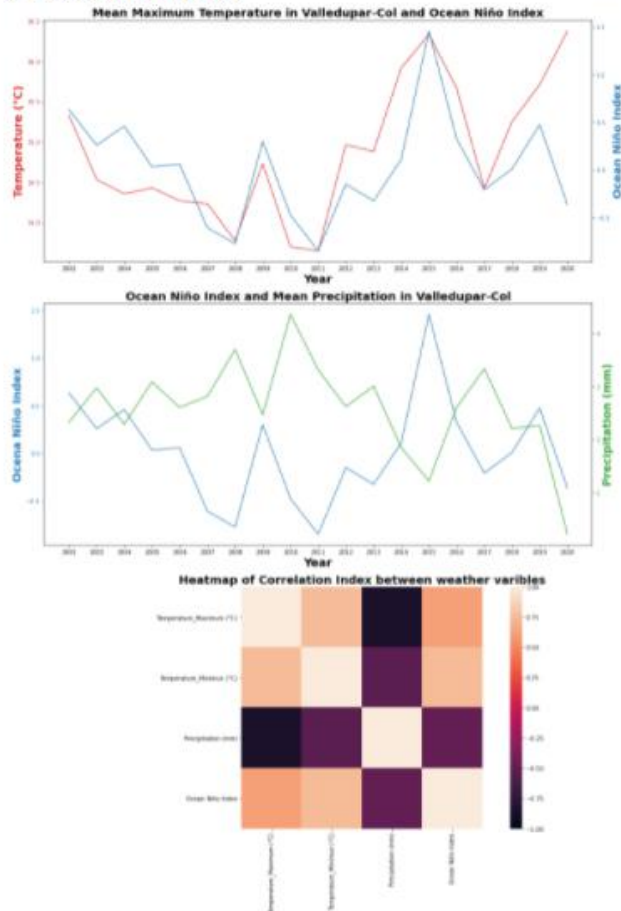
.

CUADRO DE AVISO

Upload an image which addresses your research question.

In addition to addressing your research question, this visual should address Cairo's principles of truthfulness, functionality, beauty, and insightfulness.

Correlation between the weather in Valledupar-Col and the Ocean Niño Index



The visual show three graphics which present the correlation between the mean maximum temperature and the precipitation in the city of Valledupar-Colombia vs the Ocean Niño Index. This index is a indicator of Niño or Niña phenomena.

RÚBRICA

Has the learner uploaded an image that addresses their stated question?

- ☐ 0 puntos
The learner did not upload an image that addresses their stated question.
- ☒ 2 puntos
The learner uploaded an image that addresses their stated question.



CUADRO DE AVISO

Provide a short (1-2 paragraphs) justification of how your visual addresses your research question.

The visual addresses the research question because it shows a big correlation between the ONI and the mean maximum temperature. Also there is a negative correlation between the level of precipitation and the maximum temperature and the ONI.

So we can conclude the Niño phenomenon makes the weather more hot and reduces the rains in Valledupar

RÚBRICA

Has the learner written a short (1-2 paragraph) justification of how their visualization addresses their question?

- ☐ 0 puntos
The learner has not written a short (1-2 paragraph) justification of how their visualization addresses their question.
- ☒ 3 puntos
The learner has written a short (1-2 paragraph) justification of how their visualization addresses their question.



CUADRO DE AVISO

As this assignment is for the whole course, you must incorporate and defend the principles discussed in the first week, specifically, Cairo's principles of truth, beauty, function, and insight.

For each of the following prompts, please provide a response that links each principle to one or more elements of your visual.

- Describe your design choices for your visual in regards to Cairo's principle of **truthfulness**.
- Describe your design choices for your visual in regards to Cairo's principle of **beauty**.
- Describe your design choices for your visual in regards to Cairo's principle of **functionality**.
- Describe your design choices for your visual in regards to Cairo's principle of **insightfulness**.

****truthfulness****: The visual shows the right data

****beauty****: The visual makes a difference with colors

****functionality****: The visual lets me make a conclusion easily

RÚBRICA

Did the learner describe their design choices in regards to Cairo's principle of **truthfulness** (e.g., avoiding misleading representations) and relate them to one or more elements of their visual?

- ☐ 0 puntos
No, the learner did not describe their design choices in regards to Cairo's principle of truthfulness (e.g., avoiding misleading representations) and did not relate them to one or more elements of their visual?
- ☒ 1 punto
Yes, the learner did describe their design choices in regards to Cairo's principle of truthfulness (e.g., avoiding misleading representations) and relate them to one or more elements of their visual?



Did the learner describe their design choices in regards to Cairo's principle of **beauty** (e.g., using fonts, colors, and layout that are appropriate and aesthetically pleasing) and relate them to one or more elements of their visual?

CUADRO DE AVISO

Please upload your source code.

Notebook of assignment 4

[Notebook of assignment 4](#)

The code show the data cleaning and the plotting

RÚBRICA

If you want to look at the learner's code, we recommend that you open it through the Jupyter notebook system on the Coursera platform.



good effort



great.



.

RÚBRICA GENERAL DE TAREA

In this assignment the focus is more on the mechanics of creating charts, so there is no requirement to create an enlightening chart as described by Cairo. But to explore the issue, please provide comments to the learner on the following:

1. Did the chart created teach you something new about the city/region/country? What did you learn?
2. Do you think this chart answers an interesting question? Why?
3. Name one thing which works and one which could be improved, and how would you improve it.



great effort



1. The warm ocean water and wind (El Niño and La Niña) affect extreme weather conditions around the western pacific . 2. The chart correctly shows the relationship between precipitation, temperature, and the Niño index. 3. The plot could remove the frame and use pretty colors.



I didnt know about that city in Colombia before Yes, because colombia doesnt usually change weather too much during the year, so it is interesting to see change in weather conditions and its possible explanation The idea of showing multiple graphs to explain the correlation was great, but I had to take a bit of time to analyze the heatmap because I couldnt clearly see what the colors meant