



Project:
Explore Weather Trends



Project Instructions

SEARCH



RESOURCES

CONCEPTS

- ✓ 1. Your First Project
- ✓ 2. Project Instructions
- ✓ 3. Accessing Data With SQL
- ✓ 4. Moving Averages
- 5. Project: Explore Weather Trends

Knowledge

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Student Hub

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Summary

In this project, you will analyze local and global temperature data and compare the differences between global temperature trends and temperature trends in the city where you live to overall global temperature trends.

Instructions

Your goal will be to create a visualization and prepare a write up describing the differences between global temperature trends and temperature trends in the city where you live. To do this, you'll follow the steps below:

- **Extract the data** from the database. There's a workspace in the next section of the database. You'll need to export the temperature data for the world as well as the city to where you live. You can find a list of cities and countries in the `city_info` table with the database, you'll need to write a SQL query.
 - Write a SQL query to extract the city level data. Export to CSV.
 - Write a SQL query to extract the global data. Export to CSV.
- **Open up the CSV** in whatever tool you feel most comfortable using. We suggest Google sheets, but you are welcome to use another tool, such as Python or Excel.
- **Create a line chart** that compares your city's temperatures with the global temperature. Be sure to plot the *moving average* rather than the yearly averages in order to smooth out the data and make trends more observable (the last concept in the previous lesson goes into more detail on making trends more observable in a spreadsheet).
- **Make observations** about the similarities and differences between the world's averages, as well as overall trends. Here are some questions to get you started:
 - Is your city hotter or cooler on average compared to the global average? Has it been consistent over time?
 - "How do the changes in your city's temperatures over time compare to the global average?"
 - What does the overall trend look like? Is the world getting hotter or cooler? Has it been consistent over the last few hundred years?

Submission

Your submission should be a PDF that includes:

- **An outline** of steps taken to prepare the data to be visualized in the chart, such as:
 - What tools did you use for each step? (Python, SQL, Excel, etc)
 - How did you calculate the moving average?
 - What were your key considerations when deciding how to visualize the data?
- **Line chart** with local and global temperature trends
- At least **four observations** about the similarities and/or differences in the trends between the local and global data.

Rubric

A Udacity reviewer will assess your project based on the criteria in the [project rubric](#) while you complete the project, then give yourself a quick self-assessment.