Where can I find historical raw weather data? [closed]

Ask Question

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Where can I find historical raw weather data for a project I am doing with focus on the USA and Canada. I need temperatures mainly, but other details would be nice. I am having a very hard time finding this data. I really dont want to have to scrape a weather site.

database datasource weather weather-api

edited Jun 12 '18 at 17:00

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Recursion

closed as off-topic by Taryn ♦ Mar 11 '14 at 1:37

This question appears to be off-topic. The users who voted to close gave this specific

recommend or find a tool, library or favorite off-site resource are off-topic for Stack Overflow as they tend to attract opinionated answers and spam. Instead, describe the problem and what has been done so far to solve it." – Taryn

If this question can be reworded to fit the rules in the help center, please edit the question.

4 Check forecast.io, you can get historical data as well as future forecast with very easy to use API – iTech Mar 20 '14 at 8:44

3 Answers

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At the United States National Severe Storms Laboratory Historical Weather Data Archive (note: this has since been retired).

Also, the United States National Climatic Data Center Geodata Portal.

The United States National Climatic

The United States National Climatic Data Center Most Popular Products.

edited Feb 28 '14 at 19:45

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2 revs, 2 users 96%
Gilbert Le Blanc

3 The url has changed for Climate Data Online – Brian Sep 18 '13 at 15:21

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I found myself asking this same question, and will share my experience for future Googlers.

Data sources

I wanted raw data, and lots of it... an API wouldn't do. I needed to head directly to the source. The best source for all of that data seemed to be either the NCEP or NCDC NOMADS servers:

http://nomads.ncdc.noaa.gov/dods/ <- good for historical data

(Note: A commenter indicated that you must now use https rather than http. I haven't tested it yet, but if you're having issues, try that!)

To give an idea of the amount of data, their data goes all the way back to 1979! If you're looking for Canada and the US, the North American Regional Reanalysis dataset is probably your best answer.

Using the data

I'm a big python user, and either pydap or NetCDF seemed like good tools to use. For no particular reason, I started playing around with pydap.

To give an example of how to get all of the temperature data for a particular location from the nomads website, try the following in python:

```
from pydap.client impor

# setup the connection
url = 'http://nomads.n
a_221_197901dd_hh00_00
modelconn = open_url(u
tmp2m = modelconn['tmp

# grab the data
lat_index = 200    # y
lon_index = 200    # y
print tmp2m.array[:,la
```

The above snippet will

month of January, 1979! If you needed multiple locations or all of the months, the above code would easily be modified to accommodate.

To super-data... and beyond!

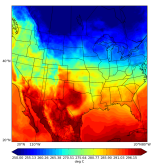
I wasn't happy stopping there. I wanted this data in a SQL database so that I could easily slice and dice it. A great option for doing all of this is the python forecasting module.

Disclosure: I put together the code behind the module. The code is all open source -- you can modify it to better meet your needs (maybe you're forecasting for Mars?) or pull out little snippets for your project.

My goal was to be able to grab the latest forecast from the Rapid Refresh model (your best bet if you want accurate info on current weather):

```
from forecasting impor

rap = Model('rap')
rap.connect(database='
fields = ['tmp2m']
rap.transfer(fields)
```



The data for the plot came directly from SQL and could easily modify the query to get out any type of data desired.

If the above example isn't enough, check out the documentation, where you can find more examples.

edited Nov 20 '18 at 18:23

community wiki
6 revs, 4 users 94%
sAlexander

1 I need weather data for all of 2015, which your link for historical data doesn't have - it stops at 201410. Do you have any ideas for me? – rjurney Sep 1 '16 at 21:09

All the data coming from the first snippet of code is returning a missing value of 9.999E20. No matter what year I choose or what latitude and longitude index I choose. Any ideas? – Matias Grioni Jan 5 '17 at 1:52

Just a quick tip: seems they are only

RR_DAILY/197901/197901/...' – Junier Feb 10 '17 at 19:24

1 share my experience for future Googlers <- this future googler thanks you – inspectorG4dget Mar 2 '17 at 16:24

3 The above link is not accesible – Anagha Sep 12 '17 at 13:33

1

wunderground.com has a good API. It is free for 500 calls per day.

http://www.wunderground.com/weather/api/

answered Jul 7 '12 at 16:37

community wiki
Lance Fisher

This is good for international weather. – philshem Feb 10 '14 at 16:05

38 Historical data NOT included! – iTurki Sep 17 '15 at 23:31

1 @Rob I'm not affiliated with wunderground.com Down vote the answer if it's not helpful. – Lance Fisher Sep 15 '16 at 19:17

underground dose have the only historical projection API I could find!! – Rob Sep 15 '16 at 19:47

1 @wilsotc 27C is 80F. Any idiot from Canada would have known that :). I bet the units were just set wrong. Also, you could have also just discovered a station that included wind chill in their report. Certainly, can't say for sure, but 25F is well within the range of chill factors. It would be interesting to find out. But yes, I agree, WU should fix/report these discrepancies. – aidan.plenert.macdor Feb 20 '18 at 23:30