Collected Knowledge & Wisdom on

OpenWeatherMap

Provides:

This API provides access to weather data for any location on Earth along with over 200,000 cities. The data is based on constantly updating global models from over 40,000 weather stations. Weather data can be retrieved from specific city names, city IDs, geographic coordinates, and/or ZIP codes.

Key Provisioning:

Pain factor (*0=ezpz...5=nightmare*): **_1_**

- Create a new account on OpenWeatherMap.org
- Sign in, which will direct you to home.openweathermap.org
- Select 'API keys', and your API key will be found there "within a couple of hours"
- All API calls need to end with `APPID={APIKEY}` (No curly brackets)

Quotas:

- No more than 60 calls per minute

The Good:

- Access to very extensive range of data regarding weather all over the world
- Gives four different options for location: geographic coordinates, city name, city id, or ZIP code
- Provides information on humidity, temperature, pressure, temperature wind, rain, and clouds all in one request.
    - Temperature is defaulted to Kelvin (K), but you can get metric (C) or imperial (F) from it with `&units=[unit]`
- Wide variety of formats: current weather, 5 day forecast, 16 day forecast, historical data, weather maps, relief maps, weather stations, weather alerts, UV index, and air pollution.

The Bad:

- Uses a lot of nested dictionaries
- Parameter names and keys are often confusing or unclear, user needs to to read and reread the API doc carefully.
    - https://openweathermap.org/weather-data
- The API doc does not clarify some of the parameters, such as weather.icon and sys.
    - More information on weather icons (as well as the images of the icons themselves, and IDs and conditions used by the API) provided here https://openweathermap.org/weather-conditions
- When there are multiple types of "main" weather, most information is moved into dictionary "list" https://samples.openweathermap.org/data/2.5/find?lat=55.5&lon=37.5&cnt=10&appid=b6907d289e10d714a6e88b30761fae22

- my workaround:

```
open_weather = json.loads(open_weather_response.read())
# the dictionary

if 'count' in open_weather: # if there are multiple weather types
      open_weather = open_weather['list'][0]

temp_now = open_weather['main']['temp']
```

The Ugly:

- You have to download a really large file to get the city codes.
  - **city.list.json.gz**: http://bulk.openweathermap.org/sample/
  - Trying to open it (after downloading) may or may not have crashed my laptop which was working overtime at the time :(10/10 would not recommend
  - There's a range of other options for location though, so it's not the absolute worst and not your *only* choice

Location: https://openweathermap.org/api/

Accurate as of `2018-12-03`
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