

# WeatherPy

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## Note

- Instructions have been included for each segment. You do not have to follow them exactly, but they are included to help you think through the steps.

```
In [1]: # Dependencies and Setup
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
import requests
import time
from pprint import pprint

# Import API key
from api_keys import api_key

# Incorporated citipy to determine city based on latitude and longitude
from citipy import citipy

# Output File (CSV)
output_data_file = "output_data/cities.csv"

# Range of latitudes and longitudes
lat_range = (-90, 90)
lng_range = (-180, 180)
```

```
In [2]: def weather_plot(plot_name, axis_x, axis_y, title, labelx, labely):
    fig, plot_name = plt.subplots(figsize=(8,5))
    fig.suptitle(title, fontsize='14')

    axis_xs = axis_x
    axis_xs_mean = axis_xs.mean()
    axis_ys = axis_y

    plot_name.scatter(axis_xs, axis_ys, color='steelblue', marker='o', e
dgecolors='black')
    plot_name.grid()
    plot_name.set_xlabel(labelx)
    plot_name.set_ylabel(labely)
    #plot_name.set_xlim([60,105])
    plot_name.legend(loc='best')
    return plt.show()
```

## Generate Cities List

```
In [3]: # List for holding lat_lngs and cities
lat_lngs = []
cities = []

# Create a set of random lat and lng combinations
lats = np.random.uniform(low=-90.000, high=90.000, size=1500)
lngs = np.random.uniform(low=-180.000, high=180.000, size=1500)
lat_lngs = zip(lats, lngs)

# Identify nearest city for each lat, lng combination
for lat_lng in lat_lngs:
    city = citipy.nearest_city(lat_lng[0], lat_lng[1]).city_name

    # If the city is unique, then add it to our cities list
    if city not in cities:
        cities.append(city)

# Print the city count to confirm sufficient count
len(cities)
```

Out[3]: 625

## Perform API Calls

- Perform a weather check on each city using a series of successive API calls.
- Include a print log of each city as it's being processed (with the city number and city name).

```
In [4]: _api_city = []
        _api_cloudiness = []
        _api_country = []
        _api_date = []
        _api_humidity = []
        _api_lat = []
        _api_lng = []
        _api_max_temp = []
        _api_wind_speed = []
        _api_cities_dict = {}

        _open_weather_url = 'https://api.openweathermap.org/data/2.5/weather?'
        print('Beginning Data Retrieval\n-----')
        for i in cities:
            _query_url = _open_weather_url + 'q='+i+'&appid='+api_key
            _api_data = requests.get(_query_url).json()
            if(_api_data['cod'] == 200):
                print("Retrieving data from " + str(i))
                _api_city.append(i)
                _api_cloudiness.append(_api_data['clouds']['all'])
                _api_country.append(_api_data['sys']['country'])
                _api_date.append(_api_data['dt'])
                _api_humidity.append(_api_data['main']['humidity'])
                _api_lat.append(_api_data['coord']['lat'])
                _api_lng.append(_api_data['coord']['lon'])
                _api_max_temp.append(_api_data['main']['temp_max'])
                _api_wind_speed.append(_api_data['wind']['speed'])
            else:
                print(str(i) + ' not found. Skipping...' )
```

## Beginning Data Retrieval

```
-----  
Retrieving data from najran  
Retrieving data from bredasdorp  
Retrieving data from norman wells  
Retrieving data from tiksi  
Retrieving data from rikitea  
Retrieving data from hobart  
Retrieving data from carnarvon  
tenosique not found. Skipping...  
Retrieving data from provideniya  
utiroa not found. Skipping...  
taolanaro not found. Skipping...  
Retrieving data from mataura  
Retrieving data from cape town  
Retrieving data from jamestown  
Retrieving data from pochutla  
lolua not found. Skipping...  
Retrieving data from zhigansk  
Retrieving data from taft  
Retrieving data from naze  
Retrieving data from yulara  
Retrieving data from butaritari  
Retrieving data from berezovka  
Retrieving data from bluff  
olafsvik not found. Skipping...  
Retrieving data from gopalur  
Retrieving data from nelspruit  
sentyabrskiy not found. Skipping...  
Retrieving data from college  
Retrieving data from severo-kurilsk  
Retrieving data from chokurdakh  
Retrieving data from albany  
Retrieving data from rawson  
Retrieving data from cherskiy  
Retrieving data from busselton  
Retrieving data from port alfred  
Retrieving data from nara  
Retrieving data from bambous virieux  
Retrieving data from opuwo  
Retrieving data from upernavik  
mys shmidta not found. Skipping...  
Retrieving data from pahrup  
Retrieving data from bethel  
Retrieving data from tuktoyaktuk  
Retrieving data from hermanus  
Retrieving data from avarua  
sakakah not found. Skipping...  
illoqqortoormiut not found. Skipping...  
Retrieving data from bandarbeyla  
alipur duar not found. Skipping...  
Retrieving data from ribeira grande  
Retrieving data from sitka  
Retrieving data from vaini  
Retrieving data from nemuro  
Retrieving data from vardo  
Retrieving data from victoria
```

Retrieving data from camapua  
Retrieving data from ushuaia  
Retrieving data from ponta do sol  
Retrieving data from sidrolandia  
Retrieving data from mahebourg  
Retrieving data from hilo  
Retrieving data from saint-georges  
Retrieving data from sinnamary  
Retrieving data from evensk  
Retrieving data from hithadhoo  
Retrieving data from maltahohe  
Retrieving data from diego de almagro  
Retrieving data from rio tercero  
bargal not found. Skipping...  
tsihombe not found. Skipping...  
Retrieving data from kaitangata  
Retrieving data from yellowknife  
samusu not found. Skipping...  
Retrieving data from leningradskiy  
Retrieving data from tessalit  
Retrieving data from mandan  
Retrieving data from belawan  
Retrieving data from isla del bosque  
Retrieving data from dhidhdhoo  
Retrieving data from severnoye  
Retrieving data from saint-philippe  
Retrieving data from biharamulo  
Retrieving data from ust-kuyga  
Retrieving data from aklavik  
Retrieving data from kautokeino  
Retrieving data from whyalla  
Retrieving data from hasaki  
Retrieving data from topolobampo  
Retrieving data from qaanaaq  
Retrieving data from codrington  
Retrieving data from deputatskiy  
Retrieving data from morden  
Retrieving data from khatanga  
Retrieving data from sibiti  
belushya guba not found. Skipping...  
Retrieving data from igaluit  
Retrieving data from souillac  
Retrieving data from mayo  
Retrieving data from port elizabeth  
Retrieving data from ozieri  
Retrieving data from guerrero negro  
Retrieving data from grimshaw  
amderma not found. Skipping...  
Retrieving data from beringovskiy  
Retrieving data from jurbarkas  
Retrieving data from vestmanna  
Retrieving data from georgetown  
Retrieving data from namatanai  
Retrieving data from te anau  
Retrieving data from chuy  
Retrieving data from pachino  
Retrieving data from pangnirtung

Retrieving data from east london  
Retrieving data from eureka  
Retrieving data from caborca  
Retrieving data from geraldton  
Retrieving data from barrow  
Retrieving data from daru  
Retrieving data from broken hill  
Retrieving data from biak  
Retrieving data from husavik  
Retrieving data from punta arenas  
Retrieving data from dodola  
Retrieving data from bubaque  
Retrieving data from kapaa  
Retrieving data from hamilton  
krivopolyanye not found. Skipping...  
rungata not found. Skipping...  
tumanny not found. Skipping...  
Retrieving data from torzhok  
saleaula not found. Skipping...  
barentsburg not found. Skipping...  
attawapiskat not found. Skipping...  
karama not found. Skipping...  
toulepleu not found. Skipping...  
Retrieving data from bundibugyo  
Retrieving data from isangel  
Retrieving data from lebu  
umzimvubu not found. Skipping...  
Retrieving data from varkaus  
jaragua not found. Skipping...  
Retrieving data from mudgee  
Retrieving data from awbari  
Retrieving data from rio cauto  
Retrieving data from clonakilty  
Retrieving data from faanui  
Retrieving data from tasiilaq  
Retrieving data from atuona  
Retrieving data from aguimes  
grand river south east not found. Skipping...  
Retrieving data from victor harbor  
Retrieving data from marawi  
Retrieving data from tromso  
Retrieving data from morehead  
Retrieving data from rorvik  
Retrieving data from saint anthony  
Retrieving data from nanortalik  
Retrieving data from kupang  
Retrieving data from tual  
Retrieving data from ahipara  
Retrieving data from sayyan  
Retrieving data from nipawin  
Retrieving data from kodiak  
Retrieving data from tuatapere  
yuzhno-yeniseyskiy not found. Skipping...  
Retrieving data from yar-sale  
Retrieving data from nizhnevartovsk  
Retrieving data from tilichiki  
Retrieving data from dikson

Retrieving data from nikolskoye  
Retrieving data from vrangel  
Retrieving data from castro  
Retrieving data from chaplynka  
Retrieving data from punata  
Retrieving data from bonavista  
Retrieving data from huanren  
Retrieving data from acapulco  
Retrieving data from baykalovo  
Retrieving data from wasilla  
Retrieving data from point pedro  
Retrieving data from donegal  
Retrieving data from zabol  
Retrieving data from chauk  
Retrieving data from tura  
Retrieving data from veracruz  
Retrieving data from warmbad  
Retrieving data from hirara  
Retrieving data from padang  
Retrieving data from broome  
Retrieving data from edd  
Retrieving data from miedzyrzecz  
Retrieving data from saskylakh  
Retrieving data from mar del plata  
Retrieving data from kavieng  
Retrieving data from longyearbyen  
Retrieving data from sorland  
Retrieving data from bowen  
Retrieving data from esperance  
vaitupu not found. Skipping...  
kusk not found. Skipping...  
Retrieving data from juneau  
Retrieving data from zlobin  
Retrieving data from kologriv  
Retrieving data from ignacio zaragoza  
Retrieving data from karratha  
Retrieving data from port victoria  
Retrieving data from zhanaozen  
Retrieving data from sharjah  
Retrieving data from fairbanks  
Retrieving data from ilulissat  
bengkulu not found. Skipping...  
Retrieving data from newport  
qabis not found. Skipping...  
Retrieving data from alofi  
Retrieving data from qaqortoq  
Retrieving data from new norfolk  
Retrieving data from touros  
katsiveli not found. Skipping...  
Retrieving data from thompson  
Retrieving data from kabare  
Retrieving data from baykit  
Retrieving data from ponta delgada  
Retrieving data from necochea  
Retrieving data from kloulklubed  
Retrieving data from itaquyry  
Retrieving data from port lincoln

Retrieving data from brunico  
Retrieving data from kutum  
Retrieving data from lima  
Retrieving data from safford  
Retrieving data from adjumani  
Retrieving data from arlit  
Retrieving data from coihaigue  
Retrieving data from ayr  
Retrieving data from nizwa  
parras not found. Skipping...  
Retrieving data from tadine  
Retrieving data from cochrane  
Retrieving data from dijkot  
Retrieving data from bay roberts  
Retrieving data from cuamba  
Retrieving data from tabou  
Retrieving data from havre  
Retrieving data from pevek  
arkangelos not found. Skipping...  
maarianhamina not found. Skipping...  
Retrieving data from byron bay  
Retrieving data from westwood  
Retrieving data from puerto ayora  
Retrieving data from kargasok  
Retrieving data from turukhansk  
Retrieving data from koster  
Retrieving data from sile  
Retrieving data from caravelas  
Retrieving data from koulikoro  
Retrieving data from shangrao  
Retrieving data from beian  
nguiu not found. Skipping...  
Retrieving data from saquena  
Retrieving data from faya  
Retrieving data from clyde river  
Retrieving data from anju  
Retrieving data from rundu  
Retrieving data from astoria  
Retrieving data from coquimbo  
Retrieving data from aykhal  
Retrieving data from orocue  
Retrieving data from oktyabrskoye  
la uribe not found. Skipping...  
Retrieving data from cidreira  
Retrieving data from vila velha  
Retrieving data from fortuna  
Retrieving data from bathsheba  
Retrieving data from katsuura  
Retrieving data from raudeberg  
Retrieving data from roma  
Retrieving data from kuytun  
Retrieving data from znamenskoye  
Retrieving data from havoysund  
Retrieving data from arraial do cabo  
asau not found. Skipping...  
Retrieving data from abu samrah  
Retrieving data from ostersund



Retrieving data from sisimiut  
Retrieving data from lagoa  
Retrieving data from skjervoy  
Retrieving data from cockburn town  
Retrieving data from myslenice  
Retrieving data from vila  
Retrieving data from romans-sur-isere  
Retrieving data from okhotsk  
Retrieving data from ilinskiy  
Retrieving data from novikovo  
Retrieving data from seminole  
Retrieving data from paita  
Retrieving data from kavaratti  
Retrieving data from ballina  
Retrieving data from auki  
waw not found. Skipping...  
Retrieving data from sao joao da barra  
Retrieving data from sapa  
Retrieving data from mount isa  
Retrieving data from bilibino  
Retrieving data from viedma  
Retrieving data from bulaevo  
Retrieving data from puerto carreno  
Retrieving data from pilot butte  
Retrieving data from vostok  
Retrieving data from luderitz  
Retrieving data from hami  
Retrieving data from beloha  
Retrieving data from pimentel  
Retrieving data from srednekolymsk  
Retrieving data from haines junction  
Retrieving data from inhambane  
Retrieving data from prichard  
Retrieving data from mehran  
Retrieving data from xinxiang  
Retrieving data from saint-pierre  
Retrieving data from atar  
Retrieving data from mehamn  
Retrieving data from trujillo  
Retrieving data from razole  
rostaq not found. Skipping...  
Retrieving data from mayskiy  
Retrieving data from cangucu  
Retrieving data from quatre cocos  
Retrieving data from salalah  
karaul not found. Skipping...  
Retrieving data from port moresby  
Retrieving data from narsaq  
Retrieving data from neepawa  
Retrieving data from arrifes  
palabuhanratu not found. Skipping...  
Retrieving data from talnakh  
Retrieving data from portland  
Retrieving data from san-pedro  
Retrieving data from key largo  
Retrieving data from yumen  
Retrieving data from omboue

Retrieving data from rafaela  
potgietersrus not found. Skipping...  
Retrieving data from carlagan  
Retrieving data from comodoro rivadavia  
Retrieving data from islampur  
Retrieving data from nome  
Retrieving data from palmer  
Retrieving data from japura  
kazalinsk not found. Skipping...  
Retrieving data from gravdal  
Retrieving data from leshukonskoye  
Retrieving data from sarkand  
Retrieving data from palm coast  
Retrieving data from mahon  
Retrieving data from shubarkuduk  
Retrieving data from choma  
Retrieving data from saint george  
Retrieving data from cabo san lucas  
Retrieving data from esil  
santa eulalia del rio not found. Skipping...  
Retrieving data from kilindoni  
Retrieving data from hervey bay  
Retrieving data from nanakuli  
Retrieving data from muroto  
Retrieving data from pontianak  
Retrieving data from antalaha  
Retrieving data from ilhabela  
Retrieving data from challans  
Retrieving data from aztec  
Retrieving data from antsohihy  
Retrieving data from vestmannaeyjar  
Retrieving data from azul  
Retrieving data from tupik  
Retrieving data from airai  
Retrieving data from mehriz  
Retrieving data from saint-augustin  
Retrieving data from kuldur  
Retrieving data from yenagoa  
Retrieving data from karaton  
Retrieving data from makasar  
Retrieving data from mpophomeni  
Retrieving data from hofn  
Retrieving data from teguise  
Retrieving data from warrnambool  
Retrieving data from lata  
Retrieving data from torbay  
Retrieving data from saldanha  
bossembele not found. Skipping...  
Retrieving data from tabas  
Retrieving data from praya  
Retrieving data from vinh  
Retrieving data from houma  
Retrieving data from sabang  
Retrieving data from sao filipe  
babanusah not found. Skipping...  
xirokambion not found. Skipping...  
Retrieving data from henties bay

Retrieving data from trelew  
Retrieving data from valley city  
Retrieving data from oussouye  
Retrieving data from dumas  
Retrieving data from maragogi  
Retrieving data from ryotsu  
Retrieving data from high level  
Retrieving data from jacareacanga  
Retrieving data from turtas  
Retrieving data from palembang  
Retrieving data from adrar  
Retrieving data from motihari  
nizhneyansk not found. Skipping...  
Retrieving data from berdigestyakh  
Retrieving data from kahului  
Retrieving data from loiza  
Retrieving data from berlevag  
Retrieving data from wagar  
warqla not found. Skipping...  
Retrieving data from dingle  
Retrieving data from derzhavinsk  
Retrieving data from ardakan  
Retrieving data from ossora  
Retrieving data from makat  
Retrieving data from rio gallegos  
Retrieving data from amnat charoen  
Retrieving data from devils lake  
Retrieving data from namibe  
Retrieving data from gazimurskiy zavod  
Retrieving data from eydhafushi  
Retrieving data from goderich  
Retrieving data from boden  
Retrieving data from tsabong  
Retrieving data from mount gambier  
Retrieving data from mujiayingzi  
Retrieving data from marrakesh  
Retrieving data from ingham  
Retrieving data from batanovci  
Retrieving data from porto nacional  
Retrieving data from moron  
Retrieving data from nantucket  
Retrieving data from fukue  
Retrieving data from honiara  
Retrieving data from san patricio  
Retrieving data from havre-saint-pierre  
Retrieving data from kshenskiy  
tarudant not found. Skipping...  
Retrieving data from virginia beach  
Retrieving data from carauari  
Retrieving data from ginir  
Retrieving data from cutro  
Retrieving data from altay  
Retrieving data from plouzane  
Retrieving data from muros  
Retrieving data from green river  
Retrieving data from lazaro cardenas  
Retrieving data from rupert

Retrieving data from roebourne  
Retrieving data from kudahuvadhoo  
Retrieving data from bastia  
Retrieving data from pauini  
Retrieving data from ixtapa  
Retrieving data from mahajanga  
Retrieving data from praia  
Retrieving data from mitsamiouli  
Retrieving data from villa carlos paz  
Retrieving data from berestechko  
Retrieving data from pisco  
Retrieving data from malindi  
Retrieving data from sola  
Retrieving data from esna  
Retrieving data from kampene  
Retrieving data from palmares do sul  
Retrieving data from otane  
Retrieving data from aripuana  
Retrieving data from boa vista  
Retrieving data from brae  
Retrieving data from mount pleasant  
Retrieving data from port augusta  
Retrieving data from mabaruma  
Retrieving data from vila franca do campo  
karkaralinsk not found. Skipping...  
Retrieving data from chimbote  
Retrieving data from arona  
Retrieving data from saint pete beach  
Retrieving data from constitucion  
aflu not found. Skipping...  
jaque not found. Skipping...  
ngukurr not found. Skipping...  
Retrieving data from fort nelson  
Retrieving data from fort-shevchenko  
lephepe not found. Skipping...  
Retrieving data from krasnovka  
Retrieving data from arman  
Retrieving data from gizo  
Retrieving data from nador  
Retrieving data from tygda  
Retrieving data from cooma  
Retrieving data from puerto guzman  
Retrieving data from sindgi  
Retrieving data from kununurra  
Retrieving data from serra  
Retrieving data from imperatriz  
mancio lima not found. Skipping...  
Retrieving data from port-cartier  
Retrieving data from kachhwa  
Retrieving data from dalvik  
Retrieving data from aksarka  
Retrieving data from bereda  
Retrieving data from pedernales  
Retrieving data from saurimo  
Retrieving data from ouesso  
Retrieving data from la asuncion  
Retrieving data from porto novo

Retrieving data from kumla  
Retrieving data from boli  
Retrieving data from kjollefjord  
Retrieving data from shreveport  
Retrieving data from alakurtti  
Retrieving data from zastron  
Retrieving data from barguzin  
Retrieving data from yichang  
Retrieving data from kazanskaya  
Retrieving data from tekeli  
el balyana not found. Skipping...  
Retrieving data from gemena  
Retrieving data from erode  
Retrieving data from senec  
kristiinankaupunki not found. Skipping...  
Retrieving data from canico  
Retrieving data from roxas  
Retrieving data from morondava  
Retrieving data from lake havasu city  
Retrieving data from beirut  
Retrieving data from fairview  
Retrieving data from orapa  
Retrieving data from kisangani  
Retrieving data from cadillac  
Retrieving data from omsukchan  
Retrieving data from launceston  
Retrieving data from amahai  
Retrieving data from matagami  
Retrieving data from varhaug  
Retrieving data from shingu  
Retrieving data from bemidji  
Retrieving data from kitgum  
Retrieving data from willowmore  
Retrieving data from kibala  
Retrieving data from ekibastuz  
Retrieving data from ambilobe  
Retrieving data from haimen  
Retrieving data from sao felix do xingu  
bur gabo not found. Skipping...  
Retrieving data from carutapera  
Retrieving data from margate  
Retrieving data from le port  
Retrieving data from keokuk  
Retrieving data from kinshasa  
Retrieving data from liuzhou  
Retrieving data from edeia  
Retrieving data from aparan  
Retrieving data from fort smith  
Retrieving data from westport  
mirina not found. Skipping...  
Retrieving data from brigantine  
Retrieving data from beidao  
Retrieving data from maniitsoq  
Retrieving data from lhokseumawe  
bolungarvik not found. Skipping...  
Retrieving data from porosozero  
Retrieving data from moyale

Retrieving data from ostrovnoy  
Retrieving data from dawei  
Retrieving data from manggar  
Retrieving data from zhangye  
Retrieving data from taoudenni  
Retrieving data from longfeng  
Retrieving data from grand gaube  
Retrieving data from khakhea  
Retrieving data from xining  
Retrieving data from tautira  
Retrieving data from wajid  
hihifo not found. Skipping...  
Retrieving data from elko  
Retrieving data from haukipudas  
Retrieving data from cap malheureux  
Retrieving data from takoradi  
Retrieving data from gorontalo  
Retrieving data from svetlogorsk  
Retrieving data from caribou  
Retrieving data from erenhot  
Retrieving data from grindavik  
Retrieving data from meadow lake  
Retrieving data from lahat  
Retrieving data from papara  
Retrieving data from port hardy  
Retrieving data from uzyn  
Retrieving data from hambantota  
Retrieving data from umm lajj  
Retrieving data from normandin  
Retrieving data from aswan  
Retrieving data from duncan  
Retrieving data from port-gentil  
Retrieving data from huarmey  
Retrieving data from seaford  
Retrieving data from ngunguru  
Retrieving data from oistins  
Retrieving data from prince rupert  
umm durman not found. Skipping...  
tammisaari not found. Skipping...  
Retrieving data from freeport  
satitoa not found. Skipping...  
Retrieving data from carroll  
Retrieving data from tsumeb  
Retrieving data from tigil  
Retrieving data from dentsville  
Retrieving data from luanda  
Retrieving data from khani  
Retrieving data from progreso  
Retrieving data from ladovskaya balka  
Retrieving data from san quintin  
mentok not found. Skipping...  
Retrieving data from komsomolskiy  
Retrieving data from naryan-mar  
Retrieving data from waddan  
Retrieving data from dossor  
kamenskoye not found. Skipping...  
Retrieving data from lewistown

```
In [5]: _api_cities_dict = list(zip(_api_city, _api_cloudiness, _api_country, _api_date, _api_humidity, _api_lat, _api_lng, _api_max_temp, _api_wind_speed))
```

## Convert Raw Data to DataFrame

- Export the city data into a .csv.
- Display the DataFrame

```
In [6]: _openweather_info_df = pd.DataFrame(_api_cities_dict,
                                           columns=['City', 'Cloudiness', 'Country', 'Date', 'Humidity', 'Lat', 'Lng', 'Max Temp', 'Wind Speed'])
```

```
In [7]: _openweather_info_df.to_csv(output_data_file)
        _openweather_info_df.head()
```

Out[7]:

	City	Cloudiness	Country	Date	Humidity	Lat	Lng	Max Temp	Wind Speed
0	najran	40	SA	1562951568	12	17.54	44.22	309.150	5.1
1	bredasdorp	87	ZA	1562951569	67	-34.53	20.04	288.150	4.1
2	norman wells	20	CA	1562951569	66	65.28	-126.83	285.150	4.6
3	tiksi	16	RU	1562951570	67	71.64	128.87	281.202	2.2
4	rikitea	49	PF	1562951570	79	-23.12	-134.97	296.802	7.0

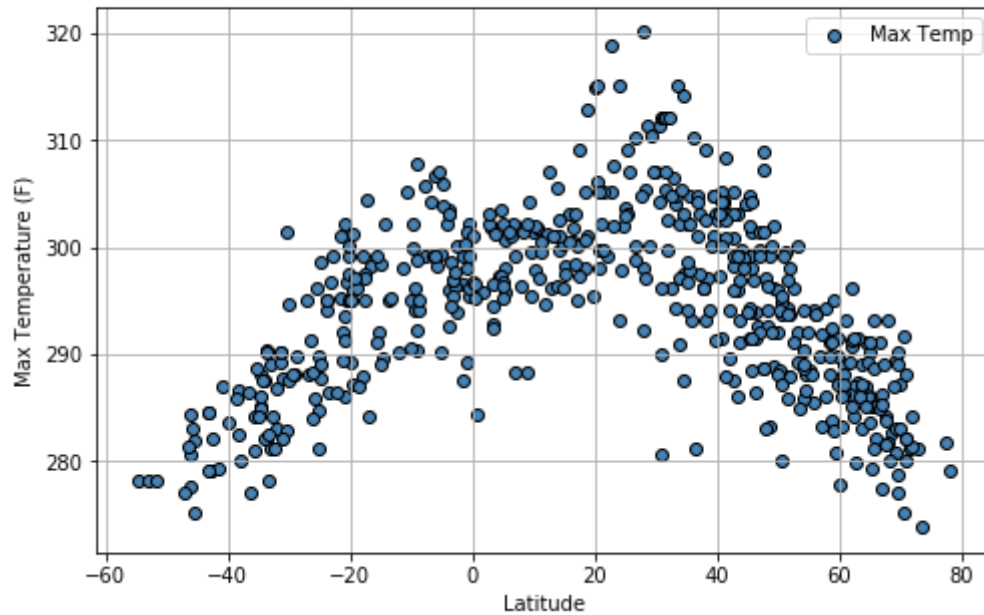
## Plotting the Data

- Use proper labeling of the plots using plot titles (including date of analysis) and axes labels.
- Save the plotted figures as .pngs.

### Latitude vs. Temperature Plot

```
In [8]: weather_plot('lat_vs_temperature',  
                    _openweather_info_df['Lat'],  
                    _openweather_info_df['Max Temp'],  
                    'City Latitude vs. Max Temperature (07/12/19)',  
                    'Latitude',  
                    'Max Temperature (F)')
```

City Latitude vs. Max Temperature (07/12/19)

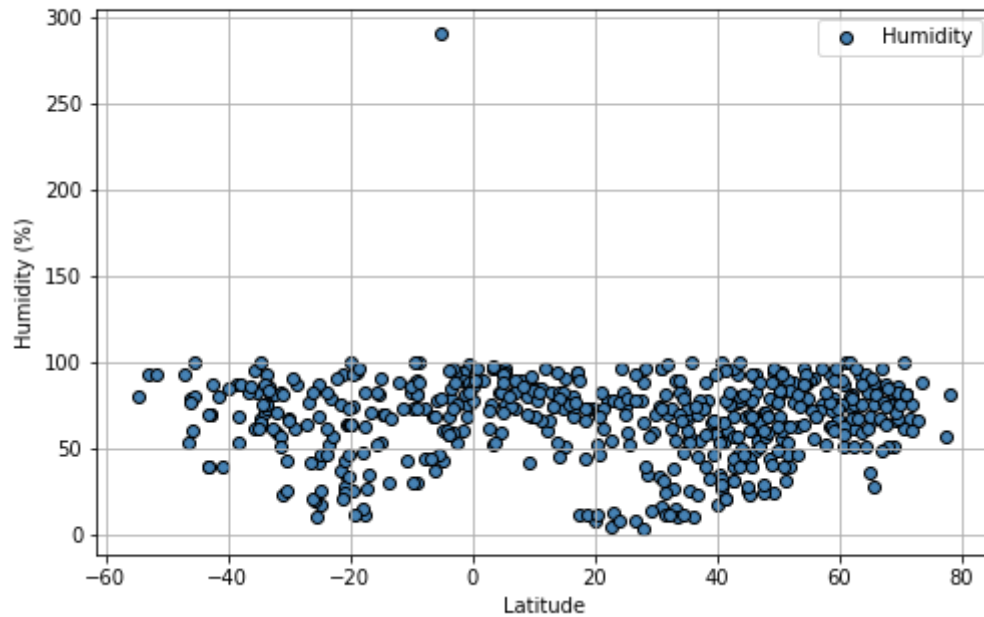


### Latitude vs. Humidity Plot



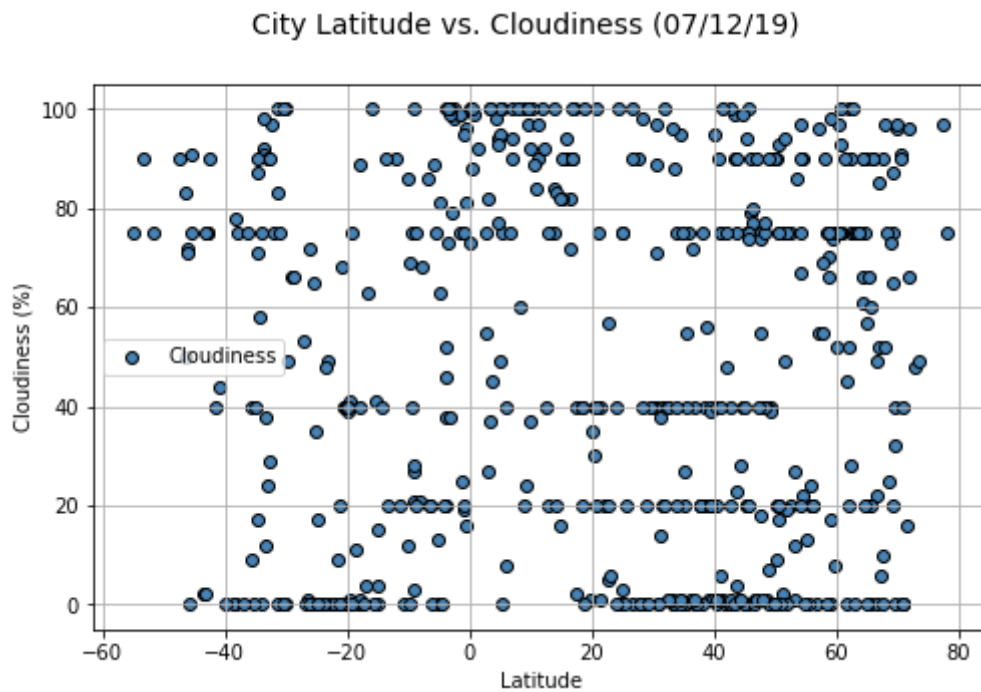
```
In [9]: weather_plot('lat_vs_humidity',  
                    _openweather_info_df['Lat'],  
                    _openweather_info_df['Humidity'],  
                    'City Latitude vs. Humidity (07/12/19)',  
                    'Latitude',  
                    'Humidity (%)')
```

City Latitude vs. Humidity (07/12/19)



### Latitude vs. Cloudiness Plot

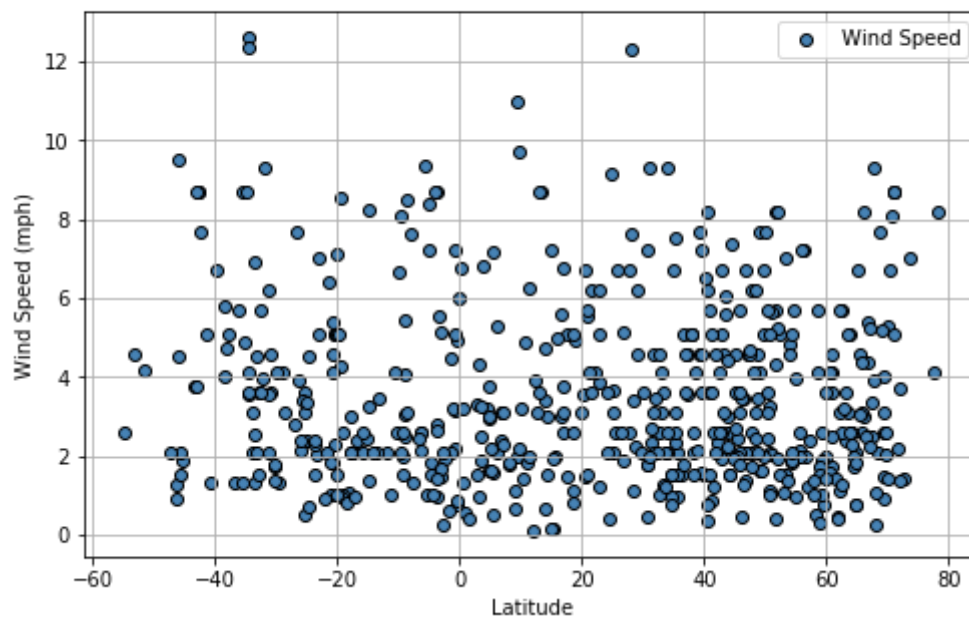
```
In [12]: weather_plot('lat_vs_cloudiness',  
                      _openweather_info_df['Lat'],  
                      _openweather_info_df['Cloudiness'],  
                      'City Latitude vs. Cloudiness (07/12/19)',  
                      'Latitude',  
                      'Cloudiness (%)')
```



### Latitude vs. Wind Speed Plot

```
In [13]: weather_plot('lat_vs_wind_speed',  
                      _openweather_info_df['Lat'],  
                      _openweather_info_df['Wind Speed'],  
                      'City Latitude vs. Wind Speed (07/12/19)',  
                      'Latitude',  
                      'Wind Speed (mph)')
```

City Latitude vs. Wind Speed (07/12/19)



```
In [ ]:
```