VacationPy

November 21, 2021

0.1 # VacationPy

[1]:
```
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
import requests
import gmaps
import os
import json
from api_keys import g_key
```

[2]:
```
df = pd.read_csv("../WeatherPy/output_data/cities.csv")
df.head()
```

[2]:

	City_ID	City	Lat	Lng	Max Temp	Humidity	Cloudiness	Wind Speed	Country	Date
0	0	chuy	-33.70	-53.46	68.58	82	0	11.74	UY	1579929811
1	1	nagornskiy	58.77	57.55	12.99	84	100	1.01	RU	1579929811
2	2	tautira	-17.73	-149.15	84.20	74	20	11.41	PF	1579929811
3	3	sitka	57.05	-135.33	33.80	80	90	11.41	US	1579929812
4	4	busselton	-33.65	115.33	93.00	17	30	18.57	AU	1579929812

0.1.1 Humidity Heatmap

[3]:
```
gmaps.configure(api_key=g_key)
```

[4]:
```
newdf = pd.DataFrame(df, columns= ['Lat', 'Lng'])

coordinates = newdf.values.tolist()

figure_layout = {
    'width': '400px',
```

```
    'height': '300px',
    'border': '1px solid black',
    'padding': '1px',
    'margin': '0 auto 0 auto'
}
fig = gmaps.figure(layout=figure_layout)

weights = df.Humidity
heatmap = gmaps.heatmap_layer(coordinates, weights=weights)

heatmap = gmaps.heatmap_layer(coordinates)
heatmap.max_intensity = 2
heatmap.point_radius = 3
fig.add_layer(heatmap)
fig
```

```
Figure(layout=FigureLayout(border='1px solid black', height='300px', margin='0␣
↪auto 0 auto', padding='1px', wi…
```

0.1.2 Create new DataFrame fitting weather criteria

[5]:
```
hotel_df = df.loc[(df["Max Temp"] >= 68) & (df["Max Temp"] <= 87) & (df["Wind␣
↪Speed"] <= 10) & (df["Cloudiness"] <= 20) & (df["Humidity"] <= 20)]
hotel_df
```

[5]:

	City_ID	City	Lat	Lng	Max Temp	Humidity	Cloudiness	Wind Speed	Country	Date
65	65	saiha	22.48	92.97	70.39	20	0	3.29	IN	1579929827
511	511	albury	-36.08	146.92	86.00	20	18	9.17	AU	1579929941

0.1.3 Hotel Map

[6]:
```
hotel_df["Hotel Name"] = ""
hotel_df
```

```
C:\Users\13306\Anaconda3\lib\site-packages\ipykernel_launcher.py:1:
SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: http://pandas.pydata.org/pandas-
docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
  """Entry point for launching an IPython kernel.
```

[6]:
```
     City_ID    City    Lat     Lng  Max Temp  Humidity  Cloudiness  \
65        65   saiha  22.48   92.97     70.39        20           0
511      511  albury -36.08  146.92     86.00        20          18

     Wind Speed Country        Date Hotel Name
65         3.29      IN  1579929827
511        9.17      AU  1579929941
```

[7]:
```
target_coordinates = "22.48, 92.97"
target_search = "Hotels"
target_radius = 8000
target_type = "lodging"

params = {
    "location": target_coordinates,
    "keyword": target_search,
    "radius": target_radius,
    "type": target_type,
    "key": g_key
}

base_url = "https://maps.googleapis.com/maps/api/place/nearbysearch/json"

response = requests.get(base_url, params=params)

hotels = response.json()
json.dumps(hotels, indent=4, sort_keys=True)

target_coordinates2 = "-36.08, 146.92"
target_search2 = "Hotels"
target_radius2 = 8000
target_type2 = "lodging"

params2 = {
    "location": target_coordinates2,
    "keyword": target_search2,
    "radius": target_radius2,
    "type": target_type2,
    "key": g_key
}

base_url = "https://maps.googleapis.com/maps/api/place/nearbysearch/json"

response2 = requests.get(base_url, params=params2)

hotels2 = response2.json()
json.dumps(hotels2, indent=4, sort_keys=True)
```

```
hotel_df["Hotel Name"] =␣
 ↪[(hotels["results"][0]["name"]),(hotels2["results"][0]["name"])]
hotel_df
```

```
Tourist Lodge
L-III, Lawngtlai
```

```
C:\Users\13306\Anaconda3\lib\site-packages\ipykernel_launcher.py:62:
SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: http://pandas.pydata.org/pandas-
docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
```

[7]:

	City_ID	City	Lat	Lng	Max Temp	Humidity	Cloudiness	\
65	65	saiha	22.48	92.97	70.39	20	0	
511	511	albury	-36.08	146.92	86.00	20	18	

	Wind Speed	Country	Date	Hotel Name
65	3.29	IN	1579929827	Tourist Lodge
511	9.17	AU	1579929941	CIRCA 1928 - a spa hotel

[ ]:
```
# Another way to do this
# params = {
#     "radius": 5000,
#     "types": "lodging",
#     "key": g_key
# }

# for index, row in hotel_df.iterrows():

#     lat = row["Lat"]
#     lng = row["Lng"]

#     params["location"] = f"{lat},{lng}"

#     base_url = "https://maps.googleapis.com/maps/api/place/nearbysearch/json"

#     name_address = requests.get(base_url, params=params)

#     name_address = name_address.json()

#     try:
#         hotel_df.loc[index, "Hotel Name"] = name_address["results"][0]["name"]
#     except (KeyError, IndexError):
#         print("Missing field/result... skipping.")
```

```
# hotel_df
```

[8]:
```
# Using the template add the hotel marks to the heatmap
info_box_template = """
<dl>
<dt>Name</dt><dd>{Hotel Name}</dd>
<dt>City</dt><dd>{City}</dd>
<dt>Country</dt><dd>{Country}</dd>
</dl>
"""
# Store the DataFrame Row
hotel_info = [info_box_template.format(**row) for index, row in hotel_df.
 ↪iterrows()]
locations = hotel_df[["Lat", "Lng"]]
```

[11]:
```
markers = gmaps.marker_layer(locations)

fig.add_layer(markers)
fig
```

```
Figure(layout=FigureLayout(border='1px solid black', height='300px', margin='0␣
 ↪auto 0 auto', padding='1px', wi…
```