cartographers_expedition

May 20, 2020

1 A Cartographers Expedition

Harold wants to have a no-cellphones birthday weekend. This means you have to come up with some way to vet out what locations everyone wants to hit up whie in NYC and plot the routes to each location. Harold wants to usually a regular map, but you have something better: Plotly Express Mapbox map plots!

Don your cartographers hat and create map plots that will pinpoint the location of the places you'll be visitng. Use this as the map/intinerary for Harold's birthday expedition.

```python
[1]: import pandas as pd
     import plotly.express as px
     import os
     from pathlib import Path
     from dotenv import load_dotenv
```

1.0.1 Prep Mapbox API Key

```python
[2]: # Read the Mapbox API key
     load_dotenv()
     map_box_api = os.getenv("mapbox")

     # Set the Mapbox API
     px.set_mapbox_access_token(map_box_api)
```

1.0.2 Prep Data

```python
[3]: # Read in data
     places_of_interest = pd.read_csv(Path('../Resources/harold_bday_plans.csv')).
     ↪dropna()
```
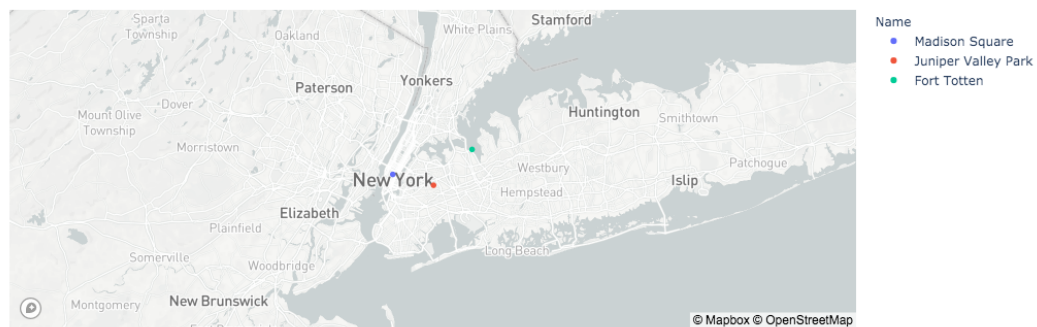
1.0.3 Route 1

```python
[4]: # Plot course for first route
     first_route = places_of_interest[
         (places_of_interest["Name"].str.contains("Airport"))
         | (places_of_interest["Name"].isin(["Aqueduct Race Track", "Astoria Park"]))
```

```
]
route_1 = px.scatter_mapbox(first_route, lat="Latitude", lon="Longitude",
 ↪color="Name")
route_1.show()
```


1.0.4 Route 2

```
[5]: # Plot course for second route
second_route = places_of_interest[
    places_of_interest["Name"].isin(
        ["Fort Totten", "Juniper Valley Park", "Madison Square"]
    )
]
route_2 = px.scatter_mapbox(second_route, lat="Latitude", lon="Longitude",
 ↪color="Name")
route_2.show()
```

1.0.5 Route 3

```
[6]: # Plot course for third route
third_route = places_of_interest[
    (
        places_of_interest["Name"].isin(
            ["Governors Island", "Liberty Island", "Ellis Island"]
        )
    )
    | (places_of_interest["Name"].str.contains("Airport"))
]
route_3 = px.scatter_mapbox(third_route, lat="Latitude", lon="Longitude",␣
 ↪color="Name")
route_3.show()
```


1.0.6 All Stops

```
[7]: # Plot course for all stops
all_stops = places_of_interest[
    (places_of_interest["Name"].str.contains("Airport"))
    | (
        places_of_interest["Name"].isin(
            [
                "Aqueduct Race Track",
                "Astoria Park",
                "Fort Totten",
                "Juniper Valley Park",
                "Madison Square",
            ]
```

3

```
        )
    )
]
all_stops= px.scatter_mapbox(all_stops, lat="Latitude", lon="Longitude",␣
 ↪color="Name")
all_stops.show()
```