

cartographers_expedition

August 24, 2019

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 while 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 visiting. Use this as the map/itinerary for Harold's birthday expedition.

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

1.1 Prep Mapbox API Key

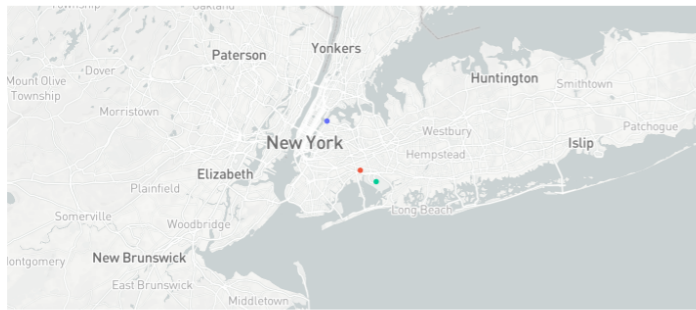
```
[2]: # Set up API credentials
map_box_api = os.getenv("MAPBOX_API_KEY")
px.set_mapbox_access_token(map_box_api)
```

1.2 Prep Data

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

1.3 Route 1

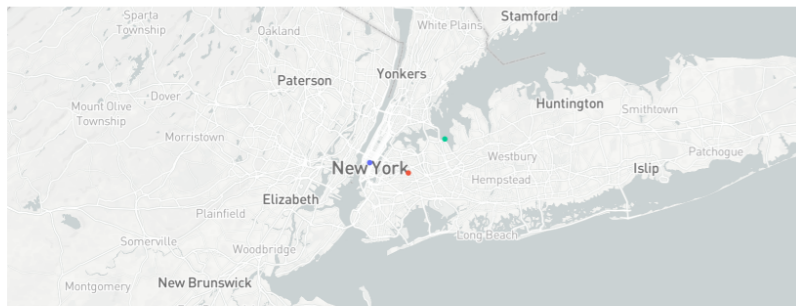
```
[4]: # Plot course for first route
first_route = places_of_interest[
    (places_of_interest["Name"].str.contains("Airport"))
    | (places_of_interest["Name"].isin(["Aqueduct Race Track", "Astoria Park"]))
]
px.scatter_mapbox(first_route, lat="Latitude", lon="Longitude", color="Name")
```



- Name=Astoria Park
- Name=Aqueduct Race Track
- Name=John F. Kennedy International Airport

1.4 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"]
    )
]
px.scatter_mapbox(second_route, lat="Latitude", lon="Longitude", color="Name")
```



- Name=Madison Square
- Name=Juniper Valley Park
- Name=Fort Totten

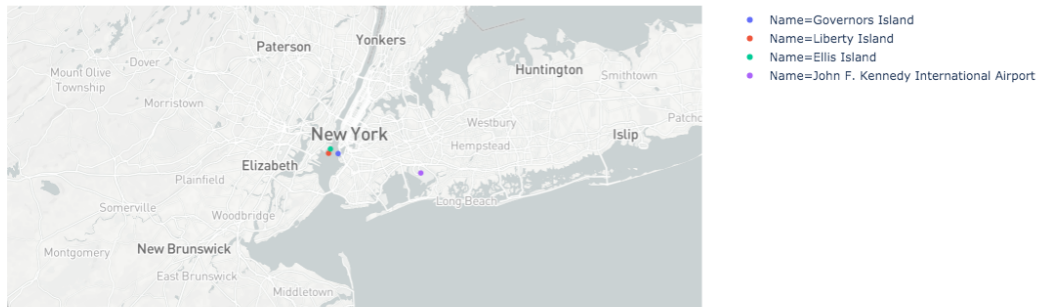
1.5 Route 3

```
[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"))
]
px.scatter_mapbox(third_route, lat="Latitude", lon="Longitude", color="Name")

```



1.6 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",
            ]
        )
    )
]
px.scatter_mapbox(all_stops, lat="Latitude", lon="Longitude", color="Name")

```



- Name=Madison Square
- Name=Astoria Park
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- Name=Fort Totten
- Name=John F. Kennedy International Airport