

# 08\_LB\_Overall\_Map\_Plotting

July 13, 2021

## 1 Generating overall Map Plot of Tweets over the whole timeline of the Dataset

### 1.1 Imports

```
[13]: import plotly.graph_objects as go
import plotly.express as px
import pandas as pd
```

```
[14]: #Reading Data
df = pd.read_csv("../data/interim/Overall_Map_data.csv")
```

#### 1.1.1 Splitting coordinates in latitude and longitude

```
[15]: df[['longitude', 'latitude']] = df.coordinates.str.split(",", expand=True)
```

#### 1.1.2 convert latitude and longitude because .mean() function is not working with strings

```
[16]: df['latitude'] = df['latitude'].astype('float')
df['longitude'] = df['longitude'].astype('float')
df['user_location'] = df['user_location'].astype('str')
df['text'] = df['text'].astype('str')
```

#### 1.1.3 Converting DataFrame to String

```
[17]: df = df.convert_dtypes()
df.id
```

```
[17]: 0      1377525606708088832
1      1377565168662503426
2      1377526350408388609
3      1377514620718551041
4      1377533079603064838
...
110711 1333596536199143428
110712 1333603436462559236
```

```

110713    1333601950525509632
110714    1333582161941729281
110715    1333588630737022976
Name: id, Length: 110716, dtype: Int64

```

## 1.2 MapPlot for Tweets by Region with Sentiment Information

```

[18]: fig = px.scatter_mapbox(lat= df["latitude"], lon= df["longitude"],
    ↪ hover_data=[df["id"], df["sentiment"]],
    color_discrete_sequence=["red"], zoom=1, height=500)

fig.update_layout(
    mapbox_style="white-bg",
    mapbox_layers=[
        {
            "below": 'traces',
            "sourcetype": "raster",
            "sourceattribution": "United States Geological Survey",
            "source": [
                ↪ "https://basemap.nationalmap.gov/arcgis/rest/services/
    ↪ USGSImageryOnly/MapServer/tile/{z}/{y}/{x}"
            ]
        }
    ])

fig.update_layout(margin={"r":0,"t":0,"l":0,"b":0})
fig.write_html("../reports/figures/OverallCovidTweets/Data_coverage.html")

fig.show()

```

### 1.2.1 Lessons learned:

The Majority of Tweets come from the US. Mostly the Eastern half of the united states. Also whole europe is involved. Most tweets in europe were posted in the united kingdom. But also from Germany and the surrounding coutries.