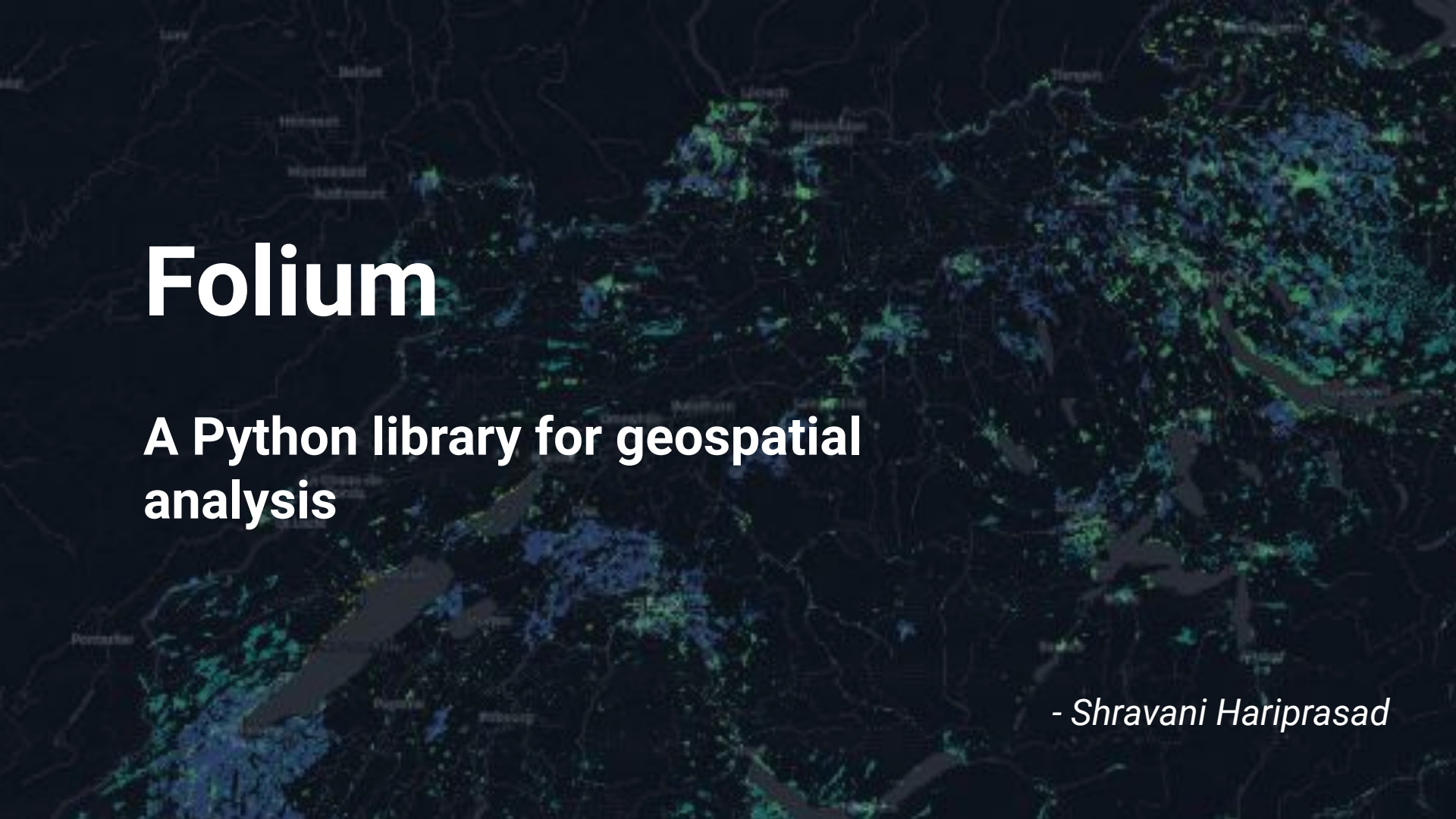


Folium

A Python library for geospatial analysis

- Shravani Hariprasad

Introduction

- **Folium is a Python library used for visualizing geospatial data interactively.**
- **Purpose: It allows users to create maps directly within Jupyter notebooks or web applications.**

Key features

- Integration with Leaflet.js library
- Rich map customization options
- Support for various map tiles and overlays
- Interactivity with markers, pop ups, and tooltips
- Seamless integration with Pandas for data manipulation

Why Folium?

- ❑ **Easy to Use**
- ❑ **Interactive Visualization**
- ❑ **Extensibility**
- ❑ **Seamless Integration**

Getting Started

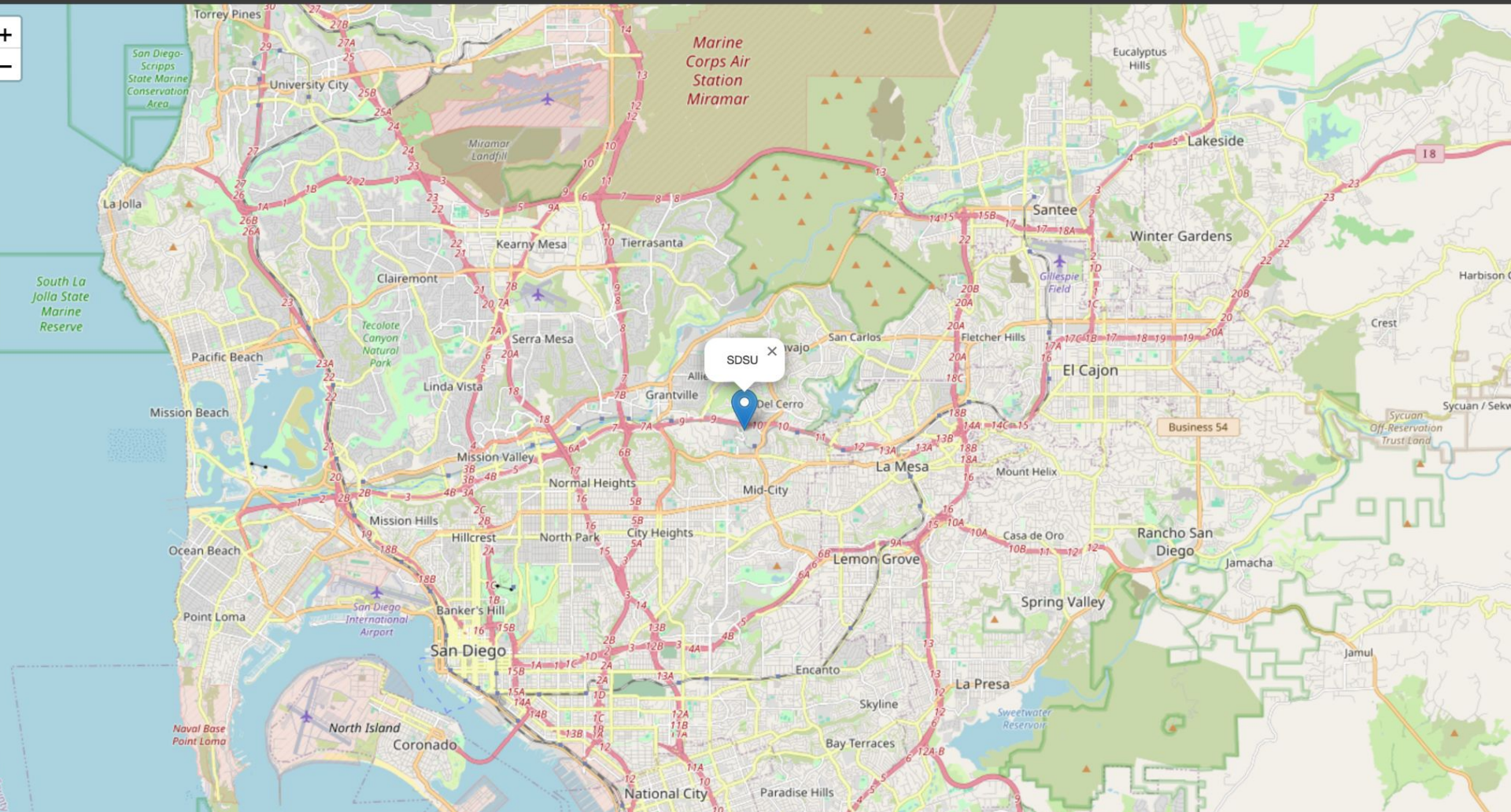
- **Installation: Folium can be installed using pip (`pip install folium`).**
- **Basic Usage: Creating a map with Folium involves specifying the location, zoom level, and optional features like markers and popups.**
- **Example Code:**

```python
import folium

# Create a map centered at a specific location
m = folium.Map(location=[32.7774047,-117.0739817], zoom_start=12)

# Add a marker
folium.Marker(location=[32.7774047,-117.0739817], popup='SDSU').add_to(m)

# Display the map
m.save('map.html')
```

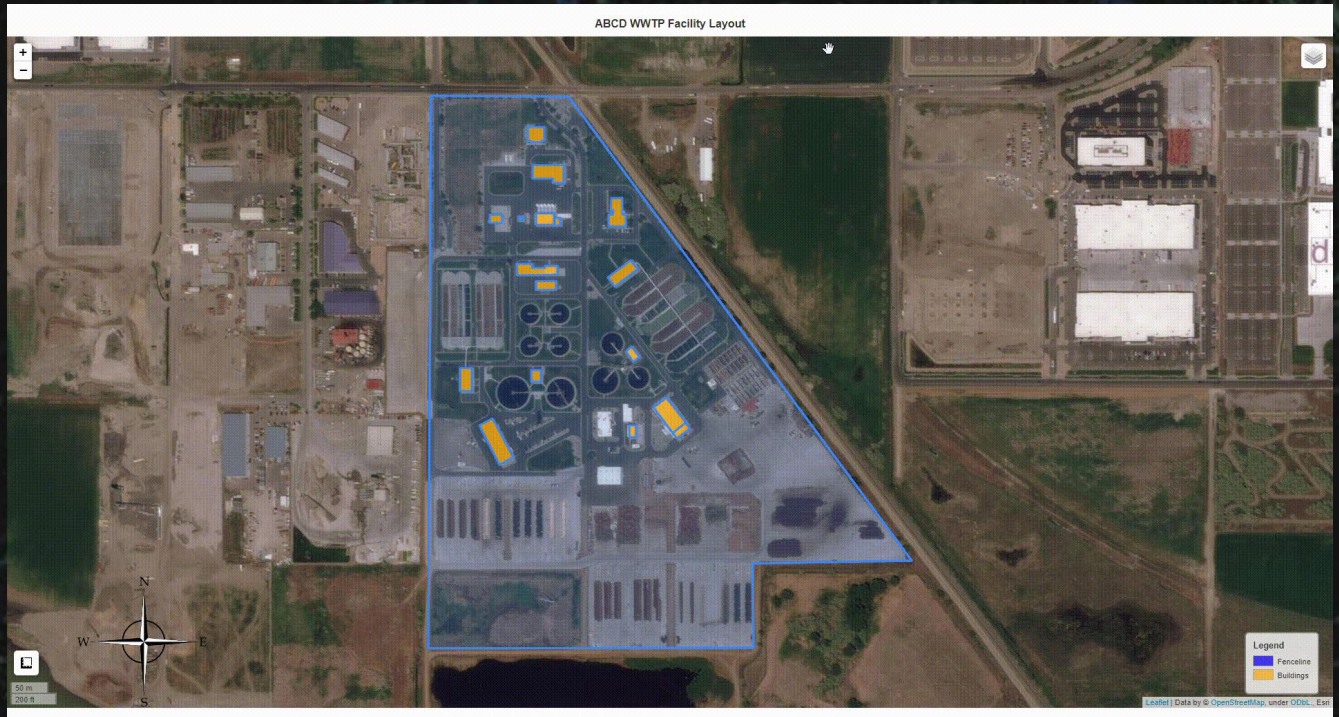

SDSU
Torrey Pines
San Diego-Scripps State Marine Conservation Area
University City
Marine Corps Air Station Miramar
Miramar Landfill
Eucalyptus Hills
Lakeside
La Jolla
Kearny Mesa
Tierrasanta
Santee
Winter Gardens
Gillespie Field
South La Jolla State Marine Reserve
Clairemont
Tecolote Canyon Natural Park
Serra Mesa
San Carlos
Fletcher Hills
Crest
Pacific Beach
Linda Vista
Grantville
Del Cerro
El Cajon
Mission Beach
Business 54
Sycuan Off-Reservation Trust Land
Mission Valley
La Mesa
Mount Helix
Normal Heights
Mid-City
Mission Hills
Hillcrest
North Park
City Heights
Ocean Beach
Lemon Grove
Casa de Oro
Rancho San Diego
Jamacha
Point Loma
San Diego International Airport
Banker's Hill
Spring Valley
San Diego
Encanto
La Presa
Jamul
Skyline
Sweetwater Reservoir
Naval Base Point Loma
North Island
Coronado
Bay Terraces
National City
Paradise Hills

Advanced Folium Features

- Custom Markers: Folium allows for the customization of markers with different colors, icons, and tooltips.
- Choropleth Maps: Folium supports the creation of choropleth maps for visualizing spatial data with color-coded regions.
- Heatmaps: Folium enables the creation of heatmaps to visualize the density of data points on the map.
- Layer Control: Folium provides options for managing layers and overlays on the map, enhancing user interactivity.

Real-world Applications

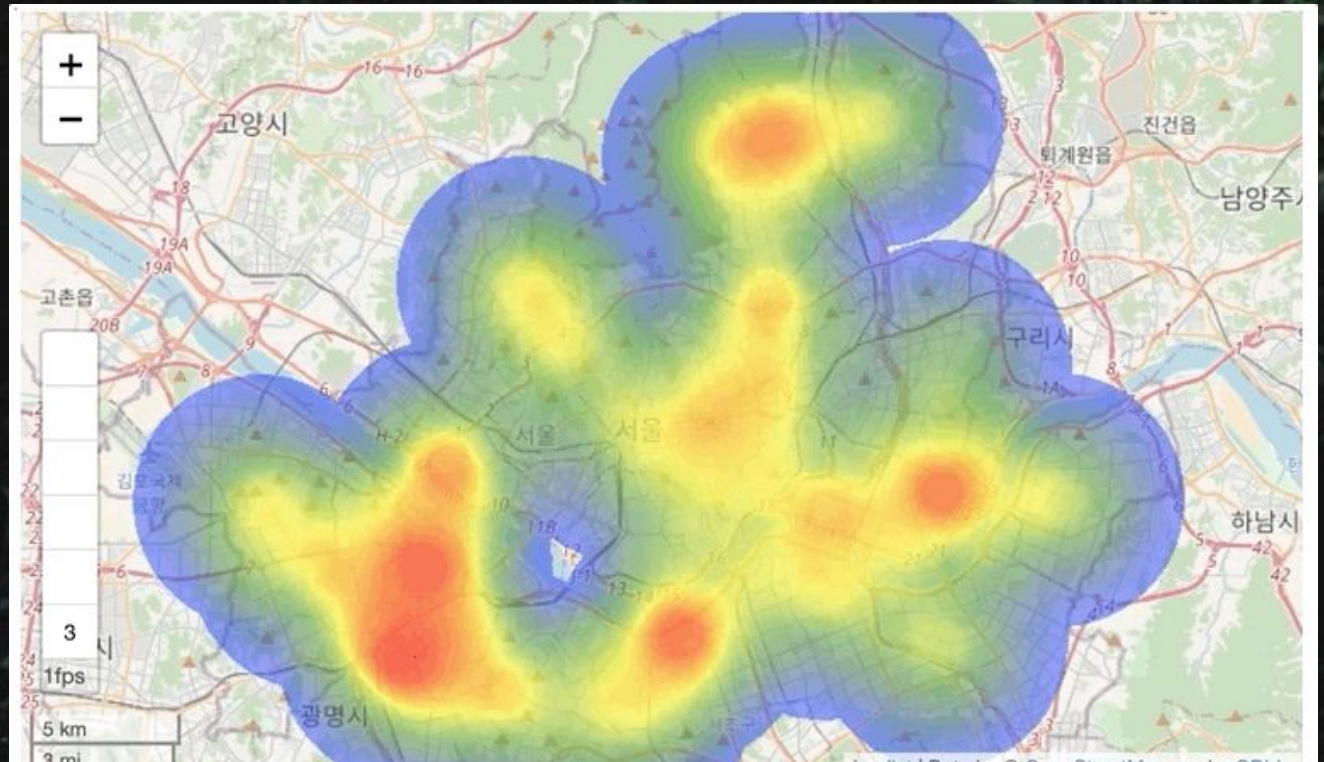
- Urban Planning: Folium can be used to visualize urban infrastructure, transportation networks, and demographic data for urban planning projects.



https://medium.com/@daniel_819/a-web-map-in-10-lines-of-code-with-streamlit-ellipsis-and-folium-6e41f7407d68

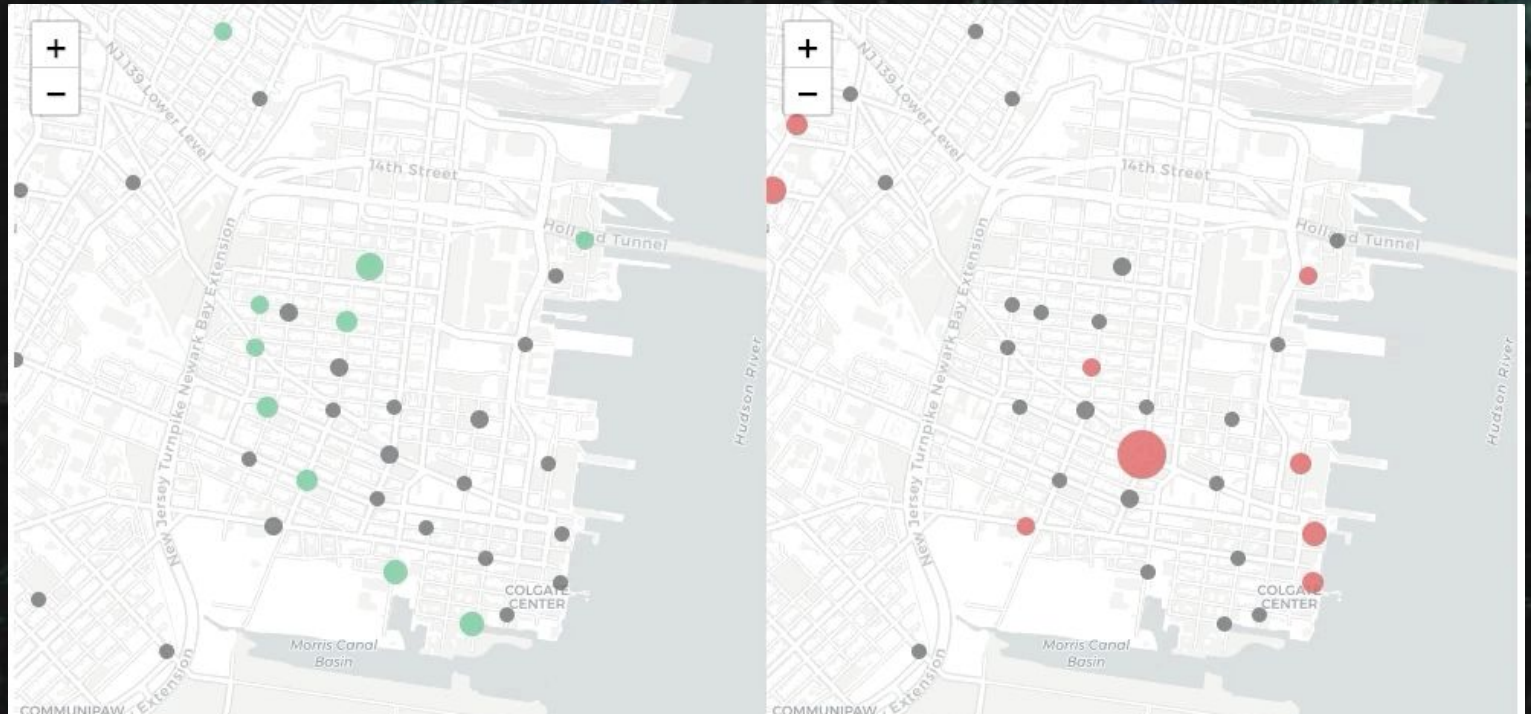
Real-world Applications

- **Environmental Monitoring:** Folium enables the visualization of environmental data such as air quality, temperature, and biodiversity for monitoring and analysis.



Real-world Applications

- **Business Intelligence**: Folium facilitates the visualization of business data, including customer locations, sales territories, and market trends, to support decision-making.



Conclusion

- Recap of Key Points: Folium is a versatile Python library for creating interactive and customizable maps for a wide range of applications.
- Benefits: Its ease of use, interactivity, and extensibility make it a valuable tool for data visualization and analysis.
- Further Exploration: Explore Folium documentation and examples to unlock its full potential for your projects.
- Read my blog: https://medium.com/@shariprasad3296/unveiling-earthquake-patterns-a-geospatial-analysis-with-python-streamlit-and-folium-d8cb2312ccff


Thank you!
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