
mplleaflet

mplleaflet is a Python library that converts a matplotlib plot into a webpage containing a pannable, zoomable Leaflet map. It can also embed the Leaflet map in an IPython notebook. The goal of mplleaflet is to enable use of Python and matplotlib for visualizing geographic data on slippy maps without having to write any Javascript or HTML. You also don't need to worry about choosing the base map content i.e., coastlines, roads, etc.

Only one line of code is needed to convert a plot into a web map. `mplleaflet.show()`

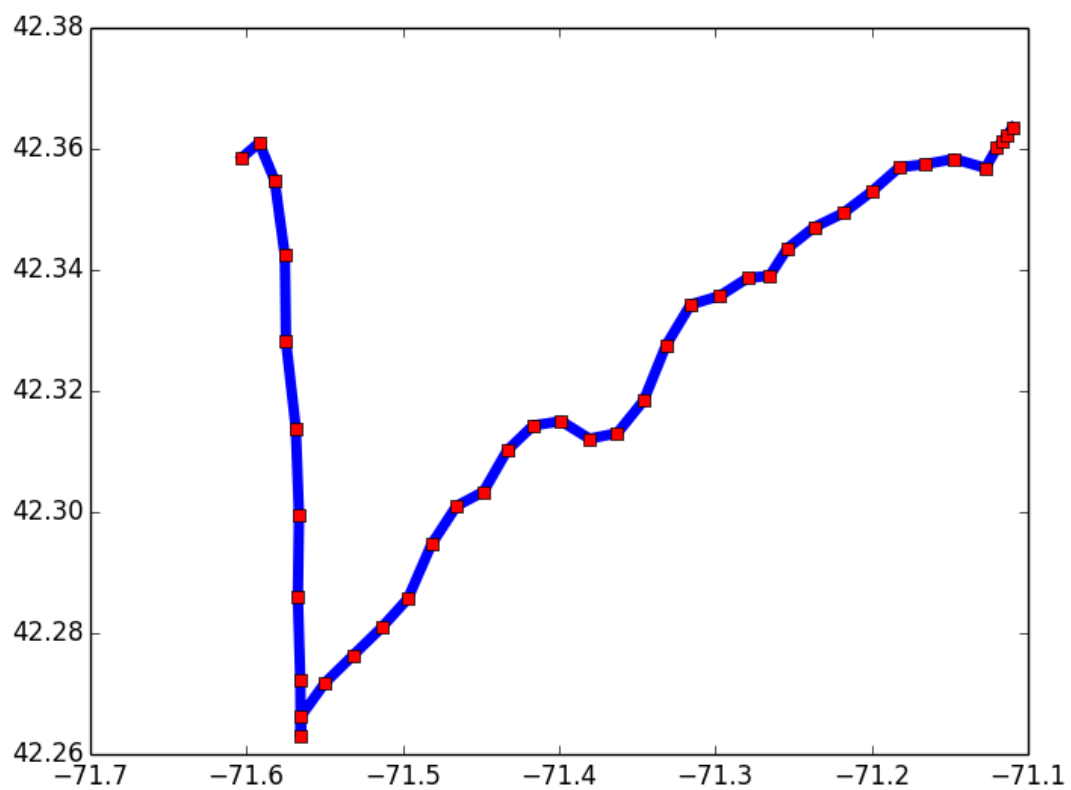
The library is heavily inspired by mpld3 and uses mplexporter to do most of the heavy lifting to walk through Figure objects.

Examples

Basic usage

The simplest use is to just create your plot using matplotlib commands and call `mplleaflet.show()`.

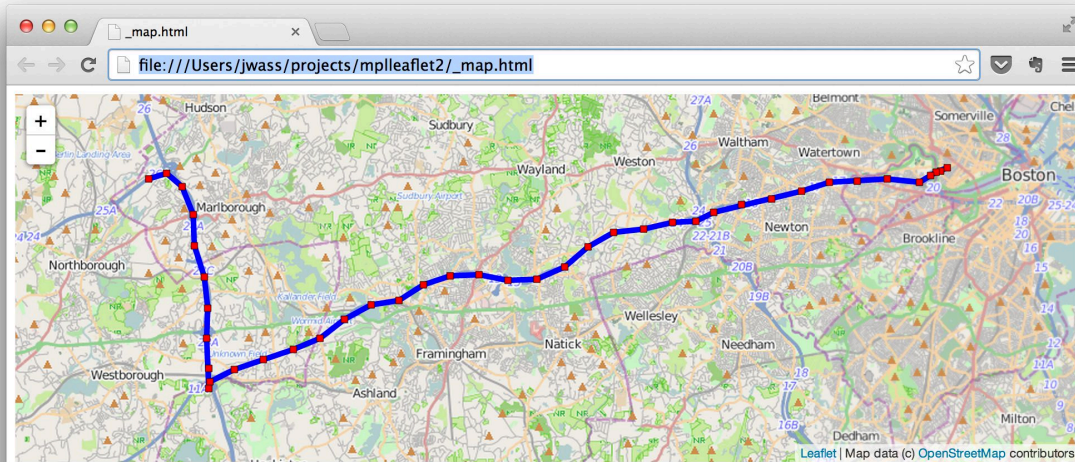
```
1 >>> import matplotlib.pyplot as plt
2 ... # Load longitude, latitude data
3 >>> plt.hold(True)
4 # Plot the data as a blue line with red squares on top
5 # Just plot longitude vs. latitude
6 >>> plt.plot(longitude, latitude, 'b') # Draw blue line
7 >>> plt.plot(longitude, latitude, 'rs') # Draw red squares
```



Normally, displaying data as longitude, latitude will cause a cartographer to cry. That's totally fine with `mplleaflet`, Leaflet will project your data properly.

```
1 # Convert to interactive Leaflet map
2 >>> import mplleaflet
3 >>> mplleaflet.show()
```

[Click to view final web page](#)



Disclaimer: Displaying data in spherical mercator might also cause a cartographer to cry.

`show()` allows you to specify different tile layer URLs, CRS/EPSG codes, output files, etc.

IPython Notebook embedding

Just use `mplleaflet.display()` to embed the interactive Leaflet map in an IPython notebook. Click [here](#) to see a live example.

Other examples

- `basic_plot.py`: Simple line/point plotting. View the map.
- `quiver.py`: Demonstrates use of `quiver()` to plot 2-D arrows. View the map.
- `contour.py`: Compute contour curves. This example demonstrates plotting in a different CRS and letting `mplleaflet` convert the output. View the map.
- Embedded IPython notebook example

Why mplleaflet?

Other Python libraries, `basemap` and `folium`, exist to create maps in Python. However `mplleaflet` allows you to leverage all `matplotlib` capability without having to set up the background basemap. You can use `plot()` to style points and lines, and you can also use more complex functions like `contour()`, `quiver()`, etc. Furthermore, with `mplleaflet` you no longer have to worry about setting up the

basemap. Displaying continents or roads is determined automatically by the zoom level required to view the physical size of the data. You should use a different library if you need fine control over the basemap, or need a geographic projection other than spherical mercator.

Installation

Install `mplleaflet` from PyPI using `$ pip install mplleaflet`.

Development

If developing for `mplleaflet`, `mplexporter` is a git submodule with its Python package files placed under the `mplleaflet` package. The Makefile copies the files into the appropriate location.

```
1 $ git submodule init
2 $ git submodule update
3 $ make
4 $ pip install -e .
```

Dependencies

- jinja2

Optional * pyproj Only needed if you only use non-WGS-84 projections. * GeoPandas To make your life easier.