

Folium and Mapping with Python

TL;DR

`folium` feels like the matplotlib of maps

- highly customizable
- highly frustrating to configure

Try `plotly` first, and fall back to `folium` if needed

Installing

```
# Install folium and vega through conda-forge
conda install folium vega -c conda-forge
# Install altair to make sub-plots "easier"
conda install altair
```

Map of Mammel Hall!

```
import folium

# start by creating a base map

m = folium.Map(location=[41.244177, -96.015444],
                 zoom_start = 16)
```

Add some helpful markers to the map!

```
# Make a list of places to include in your map
markers = [
    folium.Marker(
        location=[41.244177, -96.015444],
        popup='Mammel Hall',
        icon=folium.Icon(color='red', icon='info-sign')
    ),
    folium.Marker(
        location=[41.247266, -96.016845],
        popup='Peter Kiewit Institute',
        icon=folium.Icon(color='red', icon='info-sign')
    ),
]

# Add those places to the map!
for i in markers: i.add_to(m)
```

Adding figures as popups (but maybe don't...)

First, we need data:

```
import pandas as pd

data = pd.read_csv("your/path/here/econ_tech.csv")
data.columns = ["Week", "Econ", "Tech"]
```

Adding figures as popups (but maybe don't...)

Then we add our plots to an IFrame:

```
import altair as alt
import branca

vis3 = alt.Chart(data, width=400).mark_line().encode(
    x='Week',
    y='Econ'
).to_html()

iframe = branca.element.IFrame(html=vis3, width=500, height=450)
vis3 = folium.Popup(iframe)

m = folium.Map([43, -100], zoom_start=4)

folium.Marker([30, -100], popup=vis3).add_to(m)

m
```

Adding figures as popups (but maybe don't...)

Some thoughts:

- I tried SO many things to make this easier and look nicer
 - None of them worked
- None of the other advertised libraries were as well integrated as advertised
 - Tried Bokeh, Plotly, Altair (in several ways)

Maybe this is just one of the things I have to let go!

Me letting go...



Choropleths

Honestly, I ran out of time to figure out how to take their example code and modify it!

- Nothing made sense!
- The errors only pushed me further from an answer

Quick pitch for Plotly maps

```
# import plotly
import plotly.express as px

data = pd.read_csv("your/path/here/econ_tech_states.csv")

# Generate the map
px.choropleth(locations=data['state_code'],
locationmode="USA-states", color=data['Econ'], scope="usa")
```

Comparing

Goal	folium	plotly
Create a map with points of interest	✓	
Create a choropleth/bubble map of the US/world	~✓	✓
Using custom GeoJSON to generate a map	?	~✓
Useable offline		✓
Readable Documentation		~✓
Mapbox compatibility	✓	✓

Links to Documentation:

[Folium](#)

[Plotly](#)

Thanks!