

# Python Packages for Drawing Maps

## Geopandas

Website: <https://geopandas.org/>

Installation: `pip install geopandas`

Example Code:

```
import geopandas as gpd

world = gpd.read_file(gpd.datasets.get_path('naturalearth_lowres'))

world.plot()
```

## Cartopy

Website: <https://scitools.org.uk/cartopy/docs/latest/>

Installation: `pip install cartopy`

Example Code:

```
import cartopy.crs as ccrs

import matplotlib.pyplot as plt

fig, ax = plt.subplots(subplot_kw={'projection': ccrs.PlateCarree()})

ax.stock_img()

ax.coastlines()

plt.show()
```

## Folium

Website: <https://python-visualization.github.io/folium/>

Installation: `pip install folium`

Example Code:

```
import folium

map = folium.Map(location=[45.5236, -122.6750])

map.save("map.html")
```

## Plotly

Website: <https://plotly.com/python/maps/>

Installation: `pip install plotly`

Example Code:

```
import plotly.express as px

df = px.data.gapminder()

fig = px.choropleth(df, locations="iso_alpha", color="lifeExp", hover_name="country",
animation_frame="year")

fig.show()
```

## Basemap

Website: <https://matplotlib.org/basemap/>

Installation: `pip install basemap`

Example Code:

```
from mpl_toolkits.basemap import Basemap

import matplotlib.pyplot as plt

m = Basemap()

m.drawcoastlines()

plt.show()
```

## Mapclassify

Website: <https://pysal.org/mapclassify/>

Installation: `pip install mapclassify`

Example Code:

```
import geopandas as gpd

import mapclassify

gdf = gpd.read_file(gpd.datasets.get_path("naturalearth_lowres"))

gdf.plot(column='gdp_md_est', scheme="quantiles", cmap="Blues", legend=True)
```

## Kepler.gl

Website: <https://kepler.gl/>

Installation: `pip install keplergl`

Example Code:

```
from keplergl import KeplerGI

map_1 = KeplerGI()

map_1.save_to_html(file_name="kepler_map.html")
```

## Pydeck

Website: <https://pydeck.gl/>

Installation: `pip install pydeck`

Example Code:

```
import pydeck as pdk

view_state = pdk.ViewState(latitude=37.7749, longitude=-122.4194, zoom=11)

pdk.Deck(map_style="mapbox://styles/mapbox/light-v9", initial_view_state=view_state)
```

## Shapely

Website: <https://shapely.readthedocs.io/>

Installation: `pip install shapely`

Example Code:

```
from shapely.geometry import Point

point = Point(1.5, 2.5)

print(point)
```

## Bokeh

Website: <https://docs.bokeh.org/>

Installation: `pip install bokeh`

Example Code:

```
from bokeh.plotting import figure, show

from bokeh.tile_providers import get_provider, Vendors

p = figure(x_range=(-2000000, 6000000), y_range=(-1000000, 7000000), x_axis_type="mercator",
y_axis_type="mercator")

p.add_tile(get_provider(Vendors.CARTODBPOSITRON))

show(p)
```