Ejemplo_geopandas

October 7, 2023

[2]: `!pip install geopandas`

```
Collecting geopandas
  Obtaining dependency information for geopandas from https://files.pythonhosted
.org/packages/27/27/2687abaa2ac02b5814e2929a5033da1e5d132c19a904dc56f77f63fd6eb9
/geopandas-0.14.0-py3-none-any.whl.metadata
  Downloading geopandas-0.14.0-py3-none-any.whl.metadata (1.5 kB)
Collecting fiona>=1.8.21 (from geopandas)
  Obtaining dependency information for fiona>=1.8.21 from https://files.pythonho
sted.org/packages/43/56/915f3e4c0016f5917d65f70097e1080f1f5341f3cd2d48d9738c2465
fffa/Fiona-1.9.4.post1-cp311-cp311-
manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
  Downloading Fiona-1.9.4.post1-cp311-cp311-
manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata (49 kB)
                              49.3/49.3 kB
500.3 kB/s eta 0:00:00a 0:00:01
Requirement already satisfied: packaging in
/opt/conda/lib/python3.11/site-packages (from geopandas) (23.2)
Requirement already satisfied: pandas>=1.4.0 in /opt/conda/lib/python3.11/site-
packages (from geopandas) (2.1.1)
Collecting pyproj>=3.3.0 (from geopandas)
  Obtaining dependency information for pyproj>=3.3.0 from https://files.pythonho
sted.org/packages/64/90/dfe5c00de1ca4dbb82606e79790659d4ed7f0ed8d372bccb3baca2a5
abe0/pyproj-3.6.1-cp311-cp311-
manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
  Downloading
pyproj-3.6.1-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata
(31 kB)
Collecting shapely>=1.8.0 (from geopandas)
  Downloading
shapely-2.0.1-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (2.3
MB)
                              2.3/2.3 MB
1.9 MB/s eta 0:00:0000:0100:01m
Requirement already satisfied: attrs>=19.2.0 in
/opt/conda/lib/python3.11/site-packages (from fiona>=1.8.21->geopandas) (23.1.0)
Requirement already satisfied: certifi in /opt/conda/lib/python3.11/site-
packages (from fiona>=1.8.21->geopandas) (2023.7.22)
```

```
Requirement already satisfied: click~=8.0 in /opt/conda/lib/python3.11/site-
packages (from fiona>=1.8.21->geopandas) (8.1.7)
Collecting click-plugins>=1.0 (from fiona>=1.8.21->geopandas)
  Downloading click_plugins-1.1.1-py2.py3-none-any.whl (7.5 kB)
Collecting cligj>=0.5 (from fiona>=1.8.21->geopandas)
  Downloading cligj-0.7.2-py3-none-any.whl (7.1 kB)
Requirement already satisfied: six in /opt/conda/lib/python3.11/site-packages
(from fiona>=1.8.21->geopandas) (1.16.0)
Requirement already satisfied: numpy>=1.23.2 in /opt/conda/lib/python3.11/site-
packages (from pandas>=1.4.0->geopandas) (1.24.4)
Requirement already satisfied: python-dateutil>=2.8.2 in
/opt/conda/lib/python3.11/site-packages (from pandas>=1.4.0->geopandas) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in /opt/conda/lib/python3.11/site-
packages (from pandas>=1.4.0->geopandas) (2023.3.post1)
Requirement already satisfied: tzdata>=2022.1 in /opt/conda/lib/python3.11/site-
packages (from pandas>=1.4.0->geopandas) (2023.3)
Downloading geopandas-0.14.0-py3-none-any.whl (1.1 MB)
                              1.1/1.1 MB
2.7 MB/s eta 0:00:0000:0100:01
Downloading
Fiona-1.9.4.post1-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl
(16.4 MB)
                              16.4/16.4 MB
4.0 MB/s eta 0:00:0000:0100:01
Downloading
pyproj-3.6.1-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (8.6 MB)
                              8.6/8.6 MB
4.4 MB/s eta 0:00:0000:0100:01
Installing collected packages: shapely, pyproj, cligj, click-plugins,
fiona, geopandas
Successfully installed click-plugins-1.1.1 cligj-0.7.2 fiona-1.9.4.post1
geopandas-0.14.0 pyproj-3.6.1 shapely-2.0.1
Note: you may need to restart the kernel to use updated packages.
```

```python
[3]: import geopandas as gpd
     import matplotlib.pyplot as plt
     # Cargar la capa temática
     natalidad = "natalidad.geojson"
     map_data = gpd.read_file(natalidad)

     # Control del tamaño de la figura del mapa
     fig, ax = plt.subplots(figsize=(10, 10))

     # Control del título y los ejes
     ax.set_title('Mitsiu Alejandro Carreño Sarabia - Datos muestra [Natalidad por␣
       ↪Provincias en España, 2018]',
                  pad = 40,
```

```
              fontdict={'fontsize':15, 'color': '#000000'})
ax.set_xlabel('Longitud')
ax.set_ylabel('Latitud')

# Mostrar el mapa finalizado
map_data.plot(column='NAT2018', cmap='plasma', ax=ax, zorder=5)
# mostrar el contenidos del archivo geojson
map_data.head()
```
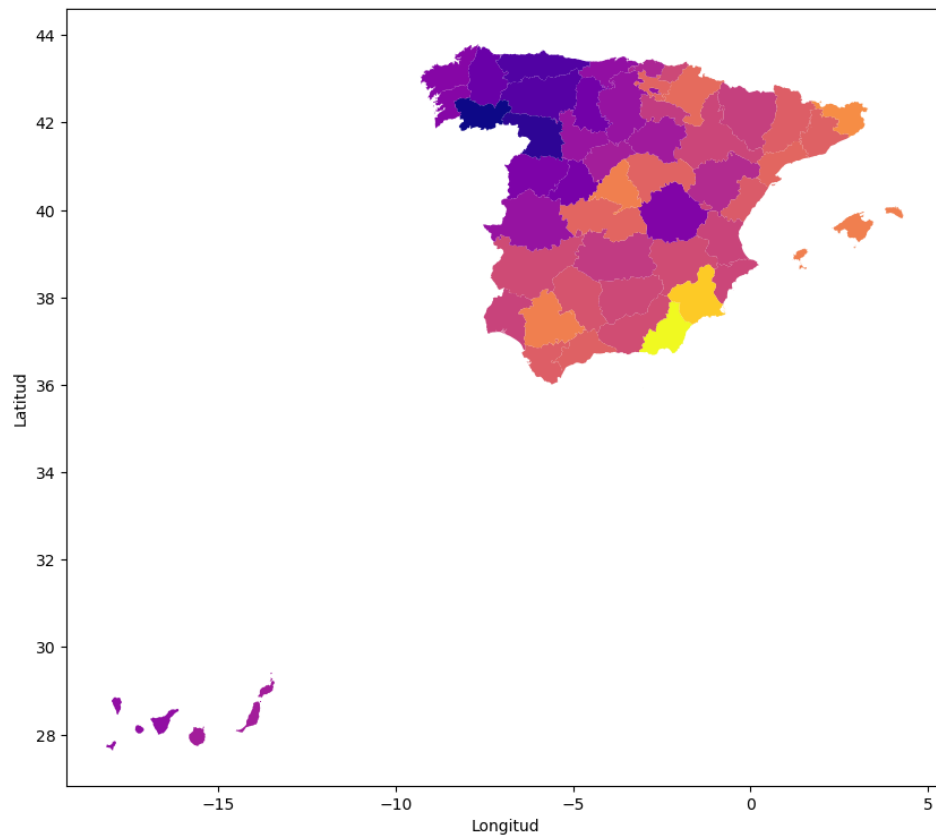
```
[3]:       NAME_1   NAME_2 CC_2  NAT2018  \
     0  Andalucía  Almería   04    10.48
     1  Andalucía    Cádiz   11     8.11
     2  Andalucía  Córdoba   14     7.90
     3  Andalucía  Granada   18     7.78
     4  Andalucía   Huelva   21     7.57


                                            geometry
     0  MULTIPOLYGON ((( -3.03042 35.94236, -3.03042 35…
     1  MULTIPOLYGON ((( -6.21958 36.38110, -6.21958 36…
     2  MULTIPOLYGON ((( -5.04854 37.63690, -5.04667 37…
     3  MULTIPOLYGON ((( -3.35014 36.72952, -3.35014 36…
     4  MULTIPOLYGON ((( -6.83648 37.11547, -6.83643 37…
```

Mitsiu Alejandro Carreño Sarabia - Datos muestra [Natalidad por Provincias en España, 2018]

[ ]: