GeoPandas





Python Geospatial Data Frame: http://geopandas.org/

Overview

GeoPandas is a project to add support for geographic data to <u>pandas</u> objects. It currently implements GeoSeries and GeoDataFrame types which are subclasses of pandas. Series and pandas. DataFrame respectively. GeoPandas objects can act on <u>shapely</u> geometry objects and perform geometric operations.

As you are aware, a pandas DataFrame is a collection of columns, additionally the rows are indexed. GeoPandas extend the core elements of pandas to include geospatial attributes and support geospatial data types for columns. One such, very important attribute, is the coordinate reference system (CRS). CRS each of a particular *projections* (http://geopandas.org/projections.html), which is a mathematical definition of how the coordinates map to a spheroid or planar system.

The geometry (Shapely) types supported by GeoPandas includes:

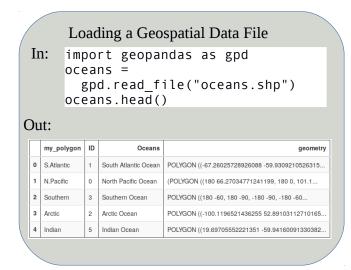
- Points / Multi-Points
- Lines / Multi-Lines
- Polygons / Multi-Polygons

Related libraries

Pandas: https://pandas.pydata.org/

Shapely: https://github.com/Toblerity/Shapely
Fiona: https://github.com/Toblerity/Fiona

Code Samples



Recipes:

Other References and Links:

Spatial Joins

https://github.com/geopandas/geopandas/blob/master/examples/spatial_joins.ipynb

Basic Rendering

http://geopandas.org/mapping.html

Well-known Text

https://en.wikipedia.org/wiki/Well-known_text