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Module: GIS Plus
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Project 06: Rasterizer Function

Abstract

A rasterinzing tool creates a regular grid whithin the bounding box of a geometry collection and assigns a value to each cell depending on the presence of a geometry in that cell region. This information can either be a binary one (no-data / data) or based on the geometry attributes. For this Project, the first cell will create a randomized geometry list containing the input data. The attributes for each of the three geometries are stored in a separated attributes list.

1 Aim of the Project

The aim of this project was to create a function that generates a raster-file (.tif). This file displays the geometries from a shapfile, which was given as input to the function. The spatial resolution and name of the output-file can be defined as input to the function. For the case that no shapefile is available to run the function, a code to generate random geometries is provided.

2 Structure of the function

2.1 Load in the shapefile

To load in the shapefile, the fiona-package is used. Every geometry-object of the shapefile is stored in a GeometryCollection from the shapely-package.

2.2 Defining the bounding box

We create a buffer around the actual shape of the shapefile which will look prettier in the resulting image.

```
class MyClass(Yourclass):
                def __init__(self, my, yours):
                bla = '5 1 2 3 4'
                print bla
```

2.3 R Code

```
#============================================================================
#                          Initial Values
#============================================================================
def rasterizer(filepath,
                                                    pixels=100,
                                                buffer=10,
outputname="output.tiff",
save=True,
preview=True):
```

3 Issues

3.1 Solved

3.2 Unsolved