University of Applied Sciences and Arts Northwestern Switzerland
School of Architecture, Civil Engineering and Geomatics

GEOMATIK

Processing Geodata using Python and Open Source Modules

Prof. Martin Christen
FHNW – University of Applied Sciences and Arts Northwestern Switzerland
School of Architecture, Civil Engineering and Geomatics
Institute Geomatics

martin.christen@fhnw.ch

MartinChristen
GitHub: MartinChristen
GitLab: martin.christen

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Geodata ?

Geographic data and information are defined in the ISO/TC 211 series of standards as data and information having an implicit or explicit association with a location relative to the Earth.

Approximately 90% of government sourced data has a location component. https://www.iso.org/committee/54904.html

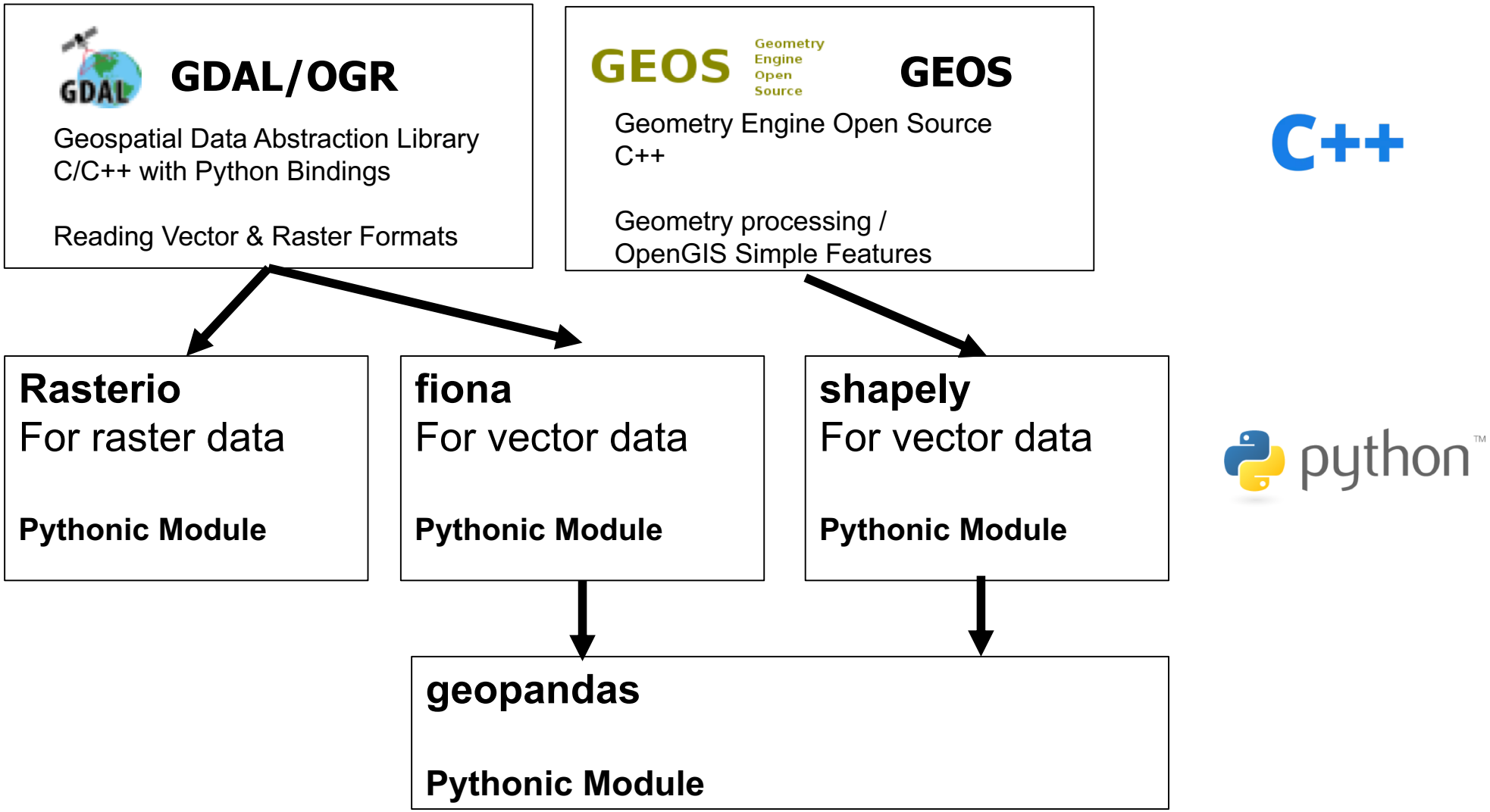
GIS – Geographic Information System

GIS is a system designed to **capture**, **store**, **manipulate**, **analyze**, **manage**, and **present** spatial or geographic data. Popular GIS are for example ArcGIS (ESRI) and QGIS – both can be extended by using Python.

Python ?

This talk will show you the basics of **manipulating**, **analyzing** and **presenting** geodata using Python (in the Jupyter Notebook.)

Important Open Source Libraries / Modules



Jupyter Notebook / Sample Data for this talk

GitHub

https://github.com/martinchristen/EP2018_Geo

Installation

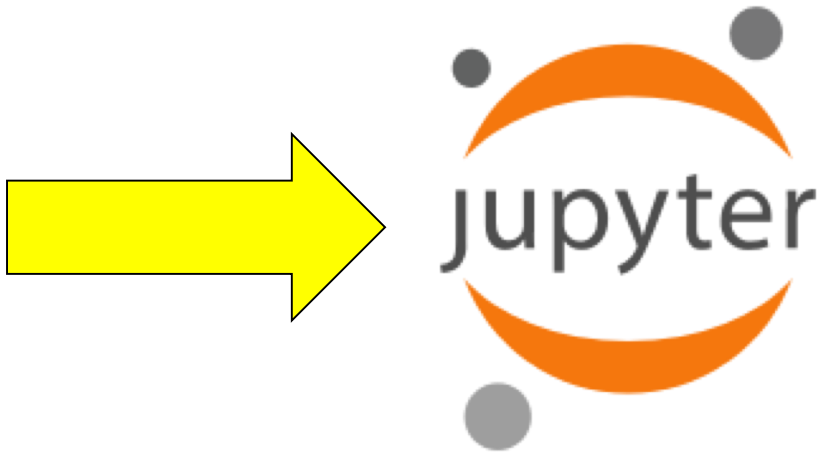
https://github.com/martinchristen/EP2018_Geo

```
conda install shapely
conda install fiona
conda install rasterio
conda install geopandas
conda install folium -c conda-forge
```

Python 3.6 required

(3.7 doesn't support all Modules yet)

https://github.com/martinchristen/EP2018_Geo



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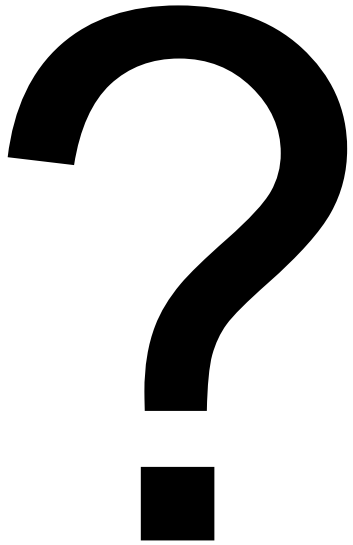
FHNW GEOMATICS

GeoPython 2019

Muttenz Switzerland
Basel

June 24-26

http://2019.geopython.net

- Python in General
- GIS/Mapping
- Geography / Geophysics / Geodesy / Geomatics
- Earth Sciences / Environmental Sciences
- Geovisualization
- Smart Cities
- Spatial Data / Geodata
- Geospatial Webservices
- Big Data
- Data Processing
- (Spatial) Databases
- Computer Vision
- Remote Sensing
- Image Processing
- Machine Learning / Deep Learning

Questions