Open Data Science

WORKSHOP

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TS Day 1 - Track 1 - 01 Introduction to spatial and spatiotemporal data in Python

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Introduction to spatial and spatiotemporal data in Python

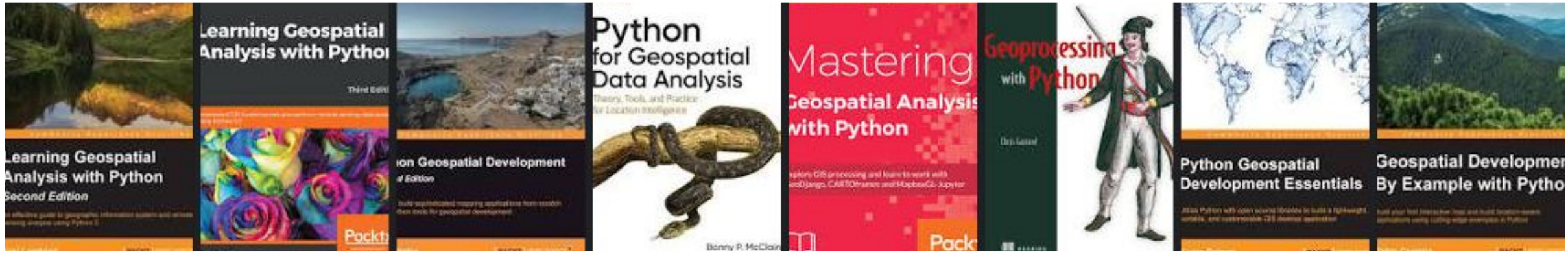
Outline

- spatial referencing basics
- raster I/O and manipulation
- vector I/O and manipulation
- computing with basic time series
- eumap convenience and performance utilities

Introduction to spatial and spatiotemporal data in Python

Python as a geospatial analytics environment

- extensive geospatial ecosystem
  - e. g. github.com/sacridini/Awesome-Geospatial#python
- extensive analytics ecosystem
  - e .g. github.com/krzjoa/awesome-python-data-science
- mature core libraries for both
  - numpy, scipy, scikit-learn, pandas, matplotlib, GDAL, fiona, shapely…
- fairly accessible language
- fairly easy to get started:
  - rasterio (GDAL + idiomatic Python)
  - geopandas (DataFrames + geometry primitives and operations)



Introduction to spatial and spatiotemporal data in Python

Now on to some code!

- download the notebook from:
  - gitlab.com/geoharmonizer_inea/odse-workshop-2022
- upload it to Colab:
  - colab.research.google.com