

## Geospatial data processing for remote sensing applications

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Schedule

Prerequisites for week 2

Summary of Bash

SPATIO-TEMPORAL ANALYSIS AND BIG DATA PROCESSING USING FREE AND OPEN SOURCE SOFTWARE	
	Week 2: 20-01 / 24-01
Monday	20-01
09.30-10.30	Introduction
10.45-12.30	Introduction to vector and raster data (theory)
13.45-14.45	Presentations projects 1-5
14.45-15.45	Introduction to open source geodata tools
16.00-17.00	Visualization of raster and vector data
Tuesday	21-01
08.30-10.30	Basic geospatial raster data processing
10.45-12.30	Exercises on geospatial raster data processing
13.45-14.45	Presentations projects 6-10
14.45-15.45	Basic geospatial vector data processing
16.00-17.00	Exercises on geospatial vector data processing
Wednesday	22-01
08.30-10.30	Installation of tools in a Linux environment
10.45-12.30	Introduction to ptools
13.45-14.45	Presentations projects 11-15
14.45-15.45	Basic image processing (theory and exercises)
16.00-17.00	Image mosaicking and compositing (theory and exercises)
Thursday	23-01
08.30-10.30	Information extraction from raster and vector data
10.45-12.30	Exercises on information extraction
13.45-14.45	Presentations projects 16-20
14.45-15.45	Introduction to machine learning: image classification
16.00-17.00	Exercise on image classification
Friday	24-01
08.30-10.30	Option 1: advanced exercises tools week 2
10.45-12.30	Option 2: solving projects using tools week 2
13.45-14.45	Presentations projects 20-23
14.45-15.45	Option 3: advanced processing on digital elevation models (LiDAR)
15.45-16.00	Summary and conclusions

- 09.30-10.30 Introduction
- 10.30-10.45 Coffee break
- 10.45-12.30 Introduction to vector and raster data (theory)
- 12.30-13.45 Lunch
- 13.45-14.45 Presentations projects 1-5
- 14.45-15.45 Introduction to open source geodata tools
- 15.45-16.00 Coffee break
- 16.00-17.00 Visualization of raster and vector data

- 08.30-10.30 Basic geospatial raster data processing
- 10.30-10.45 Coffee break
- 10.45-12.30 Exercises on geospatial raster data processing
- 12.30-13.45 Lunch
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- 14.45-15.45 Basic geospatial vector data processing
- 15.45-16.00 Coffee break
- 16.00-17.00 Exercises on geospatial vector data processing

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- 15.45-16.00 Summary and conclusions



## Prerequisites for week 2

- ▶ Bash
- ▶ GDAL/OGR
- ▶ pktools

- ▶ Environment variables
  - ▶ export FRUIT="apples"
  - ▶ echo \$FRUIT
- ▶ Basic Bash commands: cp, mkdir, ls, cat, less (more)
- ▶ command substitution \$( )
- ▶ redirection > and >>
- ▶ for loop
- ▶ while read
- ▶ file modes and permissions (rwx)
  - ▶ chmod u+x filename