



LAB 2

GEOSPATIAL REPRESENTATION LEARNING

Lab 2: Geodata Scavenger Hunt

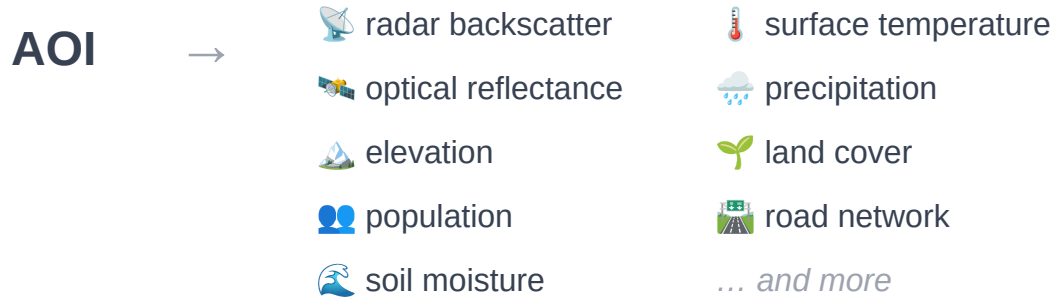
PRESS – OR SPACE. →

The Challenge

Find one way of measuring our area of interest on Earth.

Each of you will acquire one different geospatial data modality
and contribute it to our shared class dataset.

Same Place — Many Measurements



The same coordinates can carry many different measurements. Each student contributes one layer.

Your Assignment

Every student receives:

- One assigned data modality or source
- The same Area of Interest (AOI)
- The same required output CRS

Work on your assigned source only.

Assignment table

△ Instructor: insert or link to the student–dataset assignment table here.

AOI: *[to be provided]*

Required output CRS: *[e.g. EPSG:XXXXX]*

Shared Drive folder: *[link]*

Shared Google Slides: *[link]*

What You Need to Deliver

- ① One geospatial data file covering the AOI
- ② Data kept at its **native spatial resolution** — do not resample
- ③ Data reprojected to the required output CRS
- ④ File uploaded to the shared Google Drive folder
- ⑤ One completed slide in the shared Google Slides deck

Your Slide (Template)

[Dataset / product name]

screenshot or map of your data over the AOI

What does it measure? ...

Provider / source ...

Native spatial resolution ...

Temporal reference ...

Native CRS ...

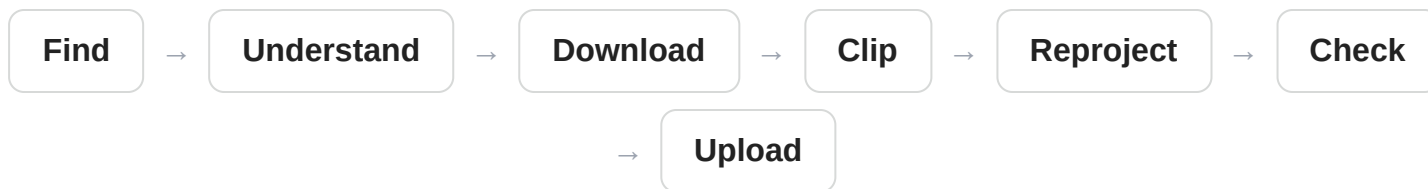
Final CRS ...

File format ...

How did you get it? (2–3 short steps)

One difficulty or surprise (one sentence)

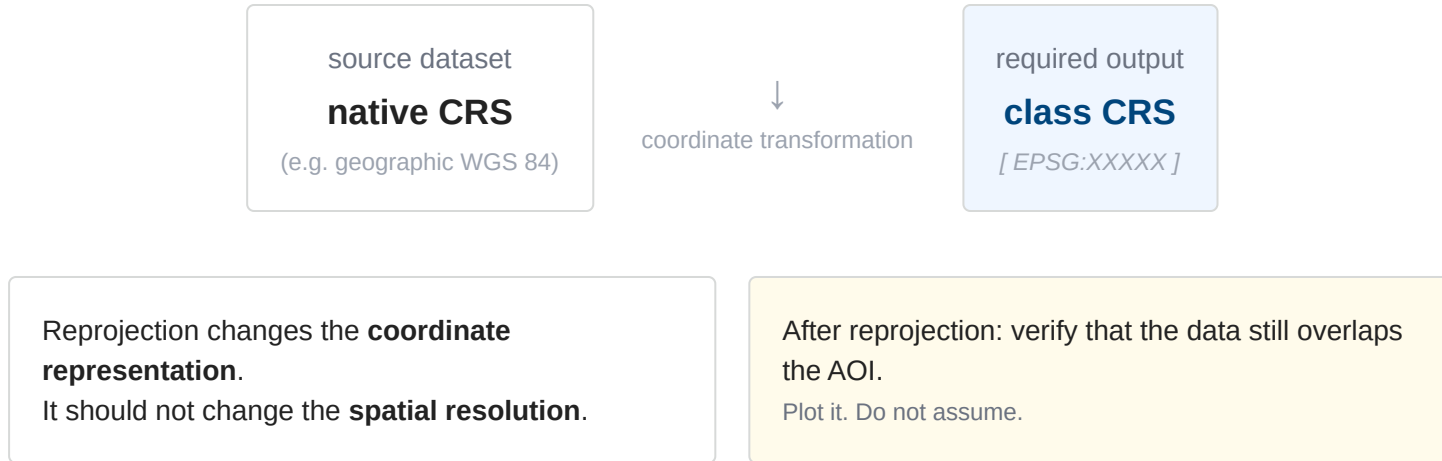
The Workflow



Before downloading anything, determine:

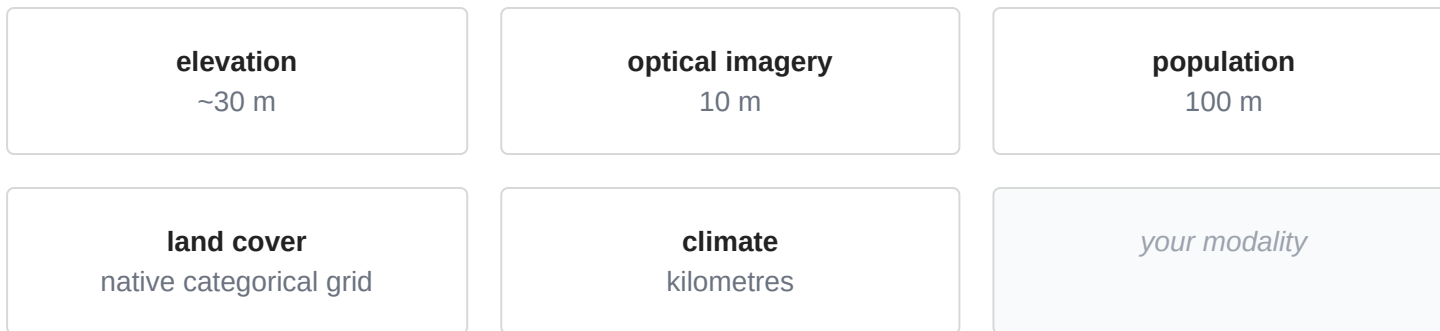
- What does this dataset actually represent?
- What is its CRS?
- What is its spatial resolution?
- What is its temporal meaning?
- What are the nodata / missing-value conventions?

Coordinate Systems Matter



Native Resolution Is Intentional

Do not make the datasets look the same yet.



The resolution mismatch is part of the problem.

A Teaser for Lab 3

Continuous values

- elevation
- surface temperature
- spectral reflectance

interpolation between pixels is meaningful

Categorical values

- land-cover class
- soil type

interpolation between pixels is not meaningful

What should the value be between two pixels?

This depends on what the values mean.

If You Get Stuck

1. Read the dataset / product documentation
2. Check the CRS and spatial extent of the file you downloaded
3. Inspect the downloaded file locally — open it, plot it
4. Ask a neighbour what they would check first
5. Ask the instructor

Do not spend 45 minutes fighting a broken download portal.
If a source is inaccessible or genuinely broken, flag it early.

Timeline

00:00–00:10

Briefing and assignments

00:10–00:25

Find your source — understand the product and its metadata

00:25–01:10

Download / access the data

01:10–01:30

Clip to AOI, reproject to class CRS, verify

01:30–01:40

Upload data file and complete your slide

01:40–02:10

Lightning presentations

Lightning Presentations

60–90 seconds per student

Answer only:

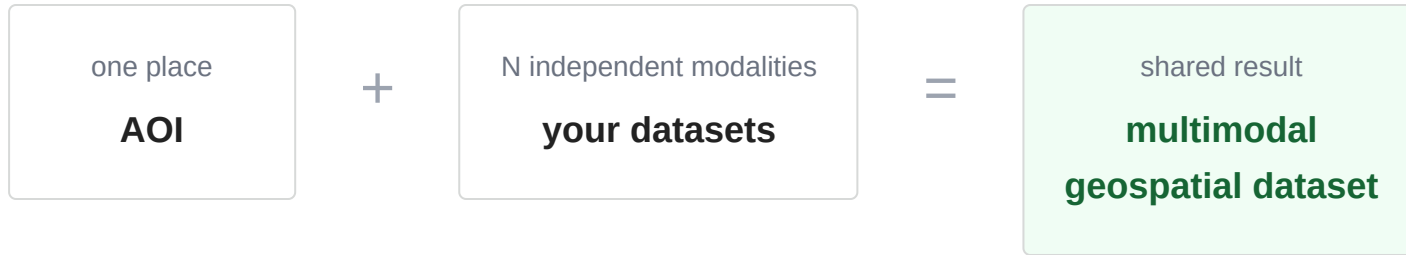
1. What does your dataset measure?
2. Where did you get it?
3. What did you have to do to make it usable?
4. What was the hardest or most surprising part?

No deep dives into the science behind the modality.

No live demos unless everything already works.

The variety of acquisition stories — APIs, portals, registration walls, 4 GB files — is itself the learning content.

What We Built Together



Keep your data and code. We will use them again in Lab 3.

Next step: coordinates → sampled values → machine-learning dataset