

Data Science Project

Summary

- Population census expensive using conventional methods
- How High-resolution satellites images could explain human density ?
- How to transform HR satellite images to explain human density ?

Virginia Landsat
WRS-2 Path / Row Index

Diagram illustrating the WRS-2 Path / Row Index for Virginia Landsat data. The paths are arranged in a grid, showing the sequence of satellite swaths (rows) for each path (columns).

Paths shown (from top-left to bottom-right):

- Path 17 Row 23
- Path 18 Row 23
- Path 19 Row 23
- Path 12 Row 24
- Path 13 Row 24
- Path 14 Row 24
- Path 7 Row 25
- Path 8 Row 25
- Path 9 Row 25

FIGURE : Landsat-8 grid covering (path,row) for Virginia (USA)

Landsat-8 images are georeferenced : each pixel has (x,y) coordinates in a certain Projection Coordinates System (*UTM Mercator*)

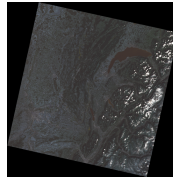


FIGURE : Landsat-8 grid covering (path,row) for Virginia (USA)

Landsat-8 georeferencing can be checked comparing with another georeferenced source like *IGN* using a *SIG* (open source *QGIS*).

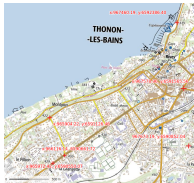


FIGURE : IGN georeferenced image from *Lambert 93*



FIGURE : IGN georeferenced image to *UTM Mercator*

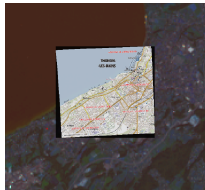


FIGURE : IGN georeferenced image (*UTM Mercator*) superposed with Landsat-8 georeferenced image (*UTM Mercator*)