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# LIH Training Offerings Aalto University

10.4.2024

Image by Gerd Altmann from Pixabay

# GIST LAB

GIScience for Sustainability Transitions (GIST) Lab advances research, teaching and open-source scientific software related to sustainable development.

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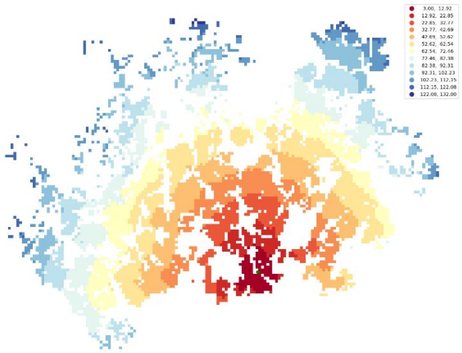
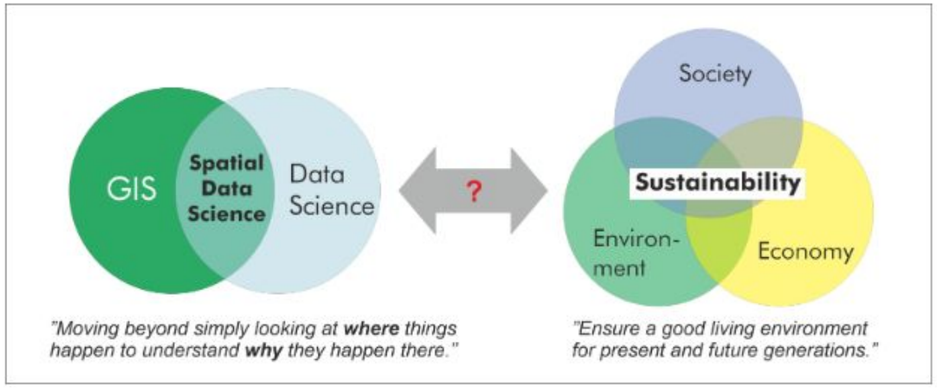
**Spatial data science for sustainable development** course introduces geographical and computational analysis approaches to study sustainability related questions. The course is inspired by the United Nation's 2030 Agenda for Sustainable Development and the Global Sustainable Development Report, as well as numerous scientific articles that have investigated sustainability related problems through the lense of geospatial analytics.

👉 Website and material
sustainability-gis.readthedocs.io

- OSM
- GIT
- Network Analysis
- Spatial Accessibility
- Spatial Regression
- Trajectories






Two main components of the course: Spatial Data Science & Sustainable Development.

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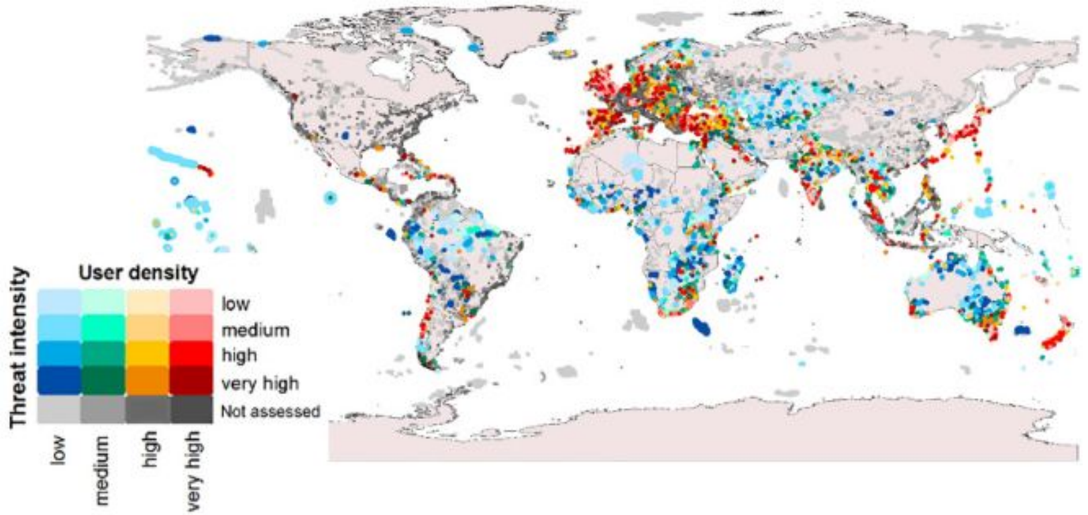
# INTRODUCTION TO SPATIAL ANALYTICS

**Spatial analytics** -course introduces you to different analysis approaches and methods of spatio-statistical analysis, geostatistics, map algebra and geovisual analysis. After the course, you can identify appropriate analysis approaches for different geospatial tasks, and describe data needs and suitable methods for the given analysis process.

👉 Website and material
spatial-analytics.readthedocs.io

- Point Pattern Analysis
- Interpolation
- Map Algebra
- Spatial Networks
- Visual Analytics




Source: Hausmann et al. (2019)

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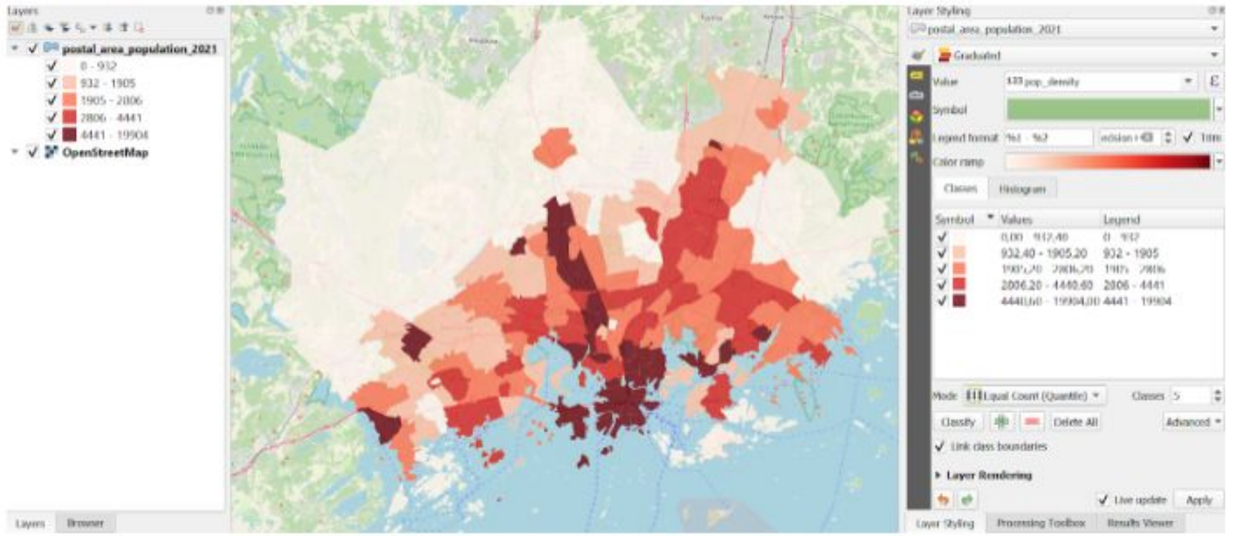
# Spatial Analysis with QGIS

## Introduction to basic spatial operations

**The Spatial Analysis with QGIS** course gives to students an introduction to basic spatial operations using the open source GIS desktop software QGIS. It leads the learners through the data management using vector and raster data format and explain basic tools that gives an start to Spatial Analysis.

👉 [Website and material](#)
qgis-tutorials.readthedocs.io

- Fetch Data Layers
- Geocoding
- Feature Selection
- Voronoi
- Buffer
- Map Algebra
- Clip Layers
- Conversions

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## 👉 LIH Offer in Catalogue

### Spatial analysis with QGIS
LIH EDIH

Spatial Analysis with QGIS -course gives to students an introduction to basic spatial operations using the open-source GIS desktop software QGIS.

Data | Data analytics

English | Beginner | Course | Online | Nonstop

€ free

### Spatial Analytics
LIH EDIH

Spatial analytics -course introduces you to different analysis approaches and methods of spatio-statistical analysis, geostatistics, map algebra and geovisual analysis.

Data | Data analytics

English | Intermediate | Course | Online | Nonstop

€ free

### Spatial Data Science for Sustainable Development
LIH EDIH

The course introduces geographical and computational analysis approaches to study sustainability related questions using Python programming and open-source libraries.

Sustainability | Programming | Data analytic

English | Advanced | Course | Online | Nonstop

€ free

## 👉Roadmaps

**Explore our curated training roadmaps**

### AI Fundamentals
Learn the fundamentals of AI.

Training steps in the roadmap:

1. Elements of AI
2. Artificial intelligence with Python
3. Ethics of AI
4. AI in Society

Metropolia | MinnaLearn

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Thanks

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