

Introduction to GIS, Geospatial Data & Spatial Statistics

Learning Outcomes

- Understand what spatial data is, and what we can and cannot do with it
- Be able to set up QGIS and add data
- Understand how to add data with a latitude / longitude coordinate
- Join tabular data to spatial data
- Understanding how to classify data for representation on a map
- Designing and producing a publication-ready map in QGIS
- Be able to use R to read in CSV data and spatial data
- Know how to plot spatial data using R
- Understand how to use loops to make multiple maps
- Know how to re-project spatial data
- Understand how to calculate distances between two locations
- Understand Linked Displays in GeoDa
- Perform Local Indicators of Spatial Autocorrelation in GeoDa

Contact

Dr Nick Bearman, nick@geospatialtrainingsolutions.co.uk, +44 (0)7717 745715

Location

Online, using Zoom, link to follow

Outline of the course

All days run 9:30am – 1:30pm (Germany/Berlin, CET), 8:30am – 12:30pm (UK/London, GMT) with a break at approx 11:30am – 11:45am CET.

- Day 1: Tue 24th Nov 2020: Introduction to QGIS, Spatial Data and Cartography
 - What is GIS?
 - Spatial Data Classification
 - Cartography and Map Design
 - IMD Maps
 - Finding GIS data
- Day 2: Wed 25th Nov 2020: Using R as a GIS
 - What is GIS & R?
 - Making a Map in R
 - Clustering of Crime Points
 - Working with your own data
- Day 3: Tue 1st Dec 2020: Spatial Statistics in R
 - Measuring Distances (QGIS and R)
 - Exploratory Data Analysis: Spatial Autocorrelation and Moran's I
 - Cluster Analysis: LISA
 - *Optional Exercises: GWR: Geographically Weighted Regression, Georeferencing, Working with your own data*

