Geospatial Data and Spatial Regression Analysis

Nick Bearman (Geospatial Training Solutions)

September 12th – 14th

Teacher e-mail:
nick@geospatialtrainingsolutions.co.uk

Language: English
Schedule: Morning, from 09:30 to 13:30 hours.

Computer requirements

For the practical part of the course, the participants are encouraged to bring a laptop with access to Internet.

Class Schedule

The sessions will be held in the morning, from 9:30 am to 1:30 pm.

Session 1 (September 12):

- Introduction to Spatial Data and QGIS. I will give an overview on how GIS works, and what we can and can't do with spatial data. We assume no prior knowledge of GIS and will explain how to get data into the GIS as well as how to produce maps using your own data. This includes discussion about symbology, and how to create a good choropleth map. This will be using some global, country level data.

Session 2 (September 13):

- Spatial Analysis in QGIS. This will use a new data set (political results & demographics) looking at relating multiple data sets together. We will cover point in polygon analysis and looking at correlation within QGIS. There is potential to extend this depending on the preparation time available. As discussed, I will probably need some input from you on finding good example data sets.

Session 3 (September 14):

- Exploratory Analysis and Regression in GeoDa. This session will focus on using GeoDa. We will use the same data as Day 2 and replicate some of the mapping and correlation options we did previously in QGIS. We will then introduce Morans' I and LISA (spatial correlation and clustering). We will touch a little bit on non-spatial regression (of spatial data) and perhaps a bit of spatial regression depending on time. I will sign post to further resources, including GWR, GAMs and Spatial Regression. I will also mention R as a GIS option as well.