



Workshop: Geographic Information Systems (GIS) For Social Data and Crisis Mapping



Date: 19th to 21st of September 2016, University of Kent, Canterbury, UK.

Course instructor: Dr Nick Bearman, Senior GIS Analyst, Clear Mapping Co.

Course details:

This 3-day workshop is free for interested participants, but subject to space constraints. Preference will be given to ESRC funded students, particularly members of the South East DTC. Interested participants must sign up by 5pm, Wednesday the 24th of August 2016, by emailing kentgisworkshop@gmail.com. Allocation will be based on a first-come-first-serve policy.

Partial funding will be provided to participants for travel and accommodation costs.

Local coordinators: Luke Abbs la289@kent.ac.uk & Gwen Wordingham gw224@kent.ac.uk

Course Outline:

This 3-day workshop will be focused on the use of GIS (Geographic Information Systems) for the analysis and mapping of social crisis data in an interdisciplinary context. This workshop is suitable for participations with no prior experience with GIS, and is designed to give the participants the best set of skills for the work they need to do. GIS is relevant for a range of research areas, including and not limited to: conflict analysis, crime and terrorism mapping, social unrest mapping e.g. riots, epidemiology, archaeology, urban planning, conservation, and migration. This workshop will provide participants with a range of transferable GIS skills which will allow them to understand complex spatial data, explore spatial data, use and apply GIS in various ways, and create a range of visualisations to present this data. This course will cover the introduction to QGIS software, mapping techniques, location geocoding, geoprocessing of spatial data, exploratory spatial data analysis, and visualisation.

This workshop will use open source QGIS software (<http://www.qgis.org/en/site/>) available for all platforms (Mac/Windows/Linux) which participants will install on their own computers. The workshop will work with a various political data sets.

Course Learning Outcomes:

1. Understand how spatial data is structured and how GIS manages spatial data.
2. Understand how to analyse existing maps and be aware of the compromises made when mapping data.
3. Be able to import spatial and non-spatial data from a range of sources into QGIS.
4. Know how to apply a range of geocoding and joining techniques to integrate their existing non-spatial data with spatial data.
5. Apply their skills learnt to present their spatial data in an appropriate way, either in a report ready map or an animation.

Workshop Outline:

Day 1: Thinking and visualising spatially

The goal of the first day is to provide the participant with an overview of spatial theories and geographic problem solving. The second goal will be to introduce participants to the fundamentals of QGIS (coordinates, attribute tables, tables of contents), types of spatial data (raster and vector – points, lines and polygons), mapping this data, and how to explore different types of data (selections and queries). We will also explore the best methods of visualising a range of different geographical data through a number of practical exercises.

Day 2: Geocoding and Geoprocessing Spatial Data

The first goal on day two will be to provide participants with the skills to combine types of data (tabular and spatial joins), and geocode non-spatial data (data scrapping). The second goal will be to provide participants with an introduction to geoprocessing and data generation (using buffers, intersections, clip, near neighbour analysis). These skills are taught using practical examples.

Day 3: Accessing and using your own spatial data

The final day will focus on applying the skills already learnt to the visualisation of participants own data. We will combine all of the skills learnt so far, covering how to manage, manipulate and visualise data in a number of different ways.