Spatial Data Science for Professionals

We live in a world where the importance and availability of spatial data are ever increasing. Today’s marketplace needs trained spatial data analysts who can:

• compile disparate data from multiple sources;
• use easily available and open technology for robust data analysis, sharing, and publication;
• apply core spatial analysis methods;
• and utilize visualization tools to communicate with project managers, the public, and other stakeholders.

With this Spatial Data Science Bootcamp for professionals, you will learn how to integrate modern Spatial Data Science techniques into your workflow through hands-on exercises that leverage open source and cloud/web-based technologies.

Join us at the Geospatial Innovation Facility (GIF) to expand your geospatial toolkit and explore new web-enhanced ways to visualize and communicate your data!

Monthly Agenda

Day 1: Learn spatial database fundamentals and explore modern spatial data formats and tools such as GeoJSON and GDAL

Day 2: Delve into open source solutions for spatial data analysis (particularly R and Python-based options)

Day 3: Explore web-based options for data visualization and publication while learning the principles of web mapping architecture

March 23-25, 2016
124 Mulford Hall
University of California at Berkeley

Three-day Technical Bootcamp
$1,500 with 10 spots reserved at $1,200 for academia/non-profit

Daily Agenda
As technology is rapidly changing, the goal is not to teach a specific suite of tools but rather to teach participants how to develop and refine **repeatable and testable workflows for spatial data using common standard programming practices.**

### Set Up Your Environment
- Virtual machine environments (Linux-based)
- Spatial databases (PostgreSQL/PostGIS) with multi-user editing and versioning

### Wrangle Data
- Modern data formats and tools (GeoJSON, GDAL)
- Working with APIs

### Analyze Data
- Python (i.e. PySAL, NumPy, PyCharm, IPython Notebook)
- R Studio (i.e. raster, sp, maptools, rgdal, shiny)

### Visualize and Publish Data
- Web mapping (web stack, HTML/CSS, JavaScript, Leaflet)
- Web-based visualizations (D3)

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**Who Should Attend?**

The Spatial Data Science Bootcamp is designed for the geospatial professional who wants to stay current in today’s dynamic world of spatial data. GIS professionals, spatial data researchers, scientists, and students will learn about the cutting edge of spatial data science and get hands-on practice using today’s latest open source analysis, visualization and database tools.

Upon completion of this training, participants will have gained the skills and resources to begin implementing these tools in their own projects. Join us at the Geospatial Innovation Facility (GIF) to expand your geospatial toolkit and explore new web-enhanced ways to visualize and communicate your data!

To apply or for more information, please visit

[http://iep.berkeley.edu/spatial](http://iep.berkeley.edu/spatial)