

Coordinated Learning Opportunities Around Geospatial Information, Analysis, and Technologies



The evolution of geospatial technologies has transformed the idea of “place” in social science research. At UC Berkeley, multiple units and programs provide instruction in methods and technologies for working with geospatial data. Yet until now, there has been little alignment and collaboration among these different units.

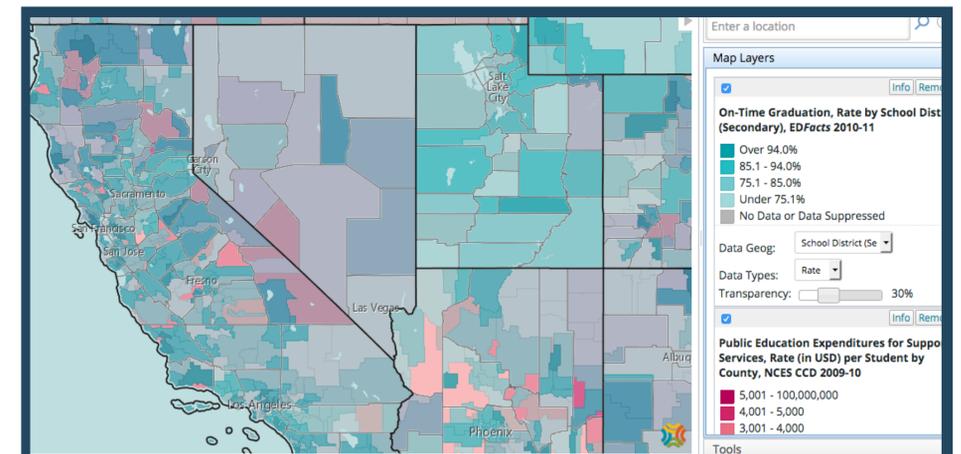
To address this challenge, Social Science Matrix is sponsoring a one-year Project Team dedicated to bringing together researchers from across the campus to investigate opportunities and mechanisms for collaborating and coordinating course content and format around geospatial data, analysis, and technology instruction.

Organized by Patty Frontiera, a researcher in UC Berkeley’s D-Lab, the team includes representatives from the under-

graduate and graduate levels, and brings together faculty, researchers, and staff. The team is also reaching out to representatives from off-campus groups, like Google and Stamen design, to better understand the skillsets required in this area.

“The broad range of disciplines involved reflects both the emerging importance of incorporating ‘place’ into a variety of distinct research domains, and also the enormous opportunity from weaving the different perspectives, analytic strategies, tools, data resources and use cases to inform research and instruction in this area,” the organizers explained in their proposal. “By having this breadth of relevant stakeholders at the table, we expect to pioneer innovative approaches around this topic that will result in the development of new partnerships and learning opportunities.”

Currently, courses are offered through the Geospatial Information Science and Technology (GIST) undergraduate minor and graduate certificate programs, which are joint efforts of the Colleges of Environmental Design, Natural Resources, and Letters and Science. Yet new courses in the School of Public Policy, Civil Engineering, and the School of Information—as well as the undergraduate Data Science Education Program—have expanded the options for learning in this area. Additionally, diverse research units—including the Geospatial Innovation Facility (GIF), Social Sciences Data Lab (DLab), the Digital Humanities Program, and the Earth Sciences and Map Library—have developed their own train-



As an example of geospatial technology supporting social science research, this map’s layers present diverse data related to education, allowing researchers to view four-year cohort graduation rates for school-districts (as reported to the U.S. Department of Education) as well as public education expenditures for support services, based on the National Center for Education Statistics (NCES) Common Core of Data (CCD) School District Finance Survey. Source: https://maps.communitycommons.org/viewer/?action=open_map&id=10211

ing materials and workshops on specific geospatial tools, technologies, and methods.

The Matrix Project Team brings leaders from these different units together to identify strengths, weaknesses, opportunities, and challenges, with a goal to make recommendations for more effective coordination and other program improvements. They are developing a survey for faculty with a goal to build a roadmap that students can use to guide their learning in geospatial technologies.

“The significance of this work is that it could result in improved geospatial instruction on campus,” the team’s organizers explained. “This would not only benefit students but also departments, units and programs. Currently, Berkeley has a great, but uncoordinated, set of academic courses and trainings around geospatial data, analysis, and technologies. With additional coordination and collaboration, it could be the best learning environment in the country.”

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RESEARCH GOALS

- Develop a network of participants in geospatial education at Berkeley.
- Facilitate the exchange of ideas and information to better align and coordinate existing and emerging programs; reduce unnecessary redundancies, identify gaps, improve scaffolding, identify pathways for collaboration and coordination, and identify trajectories for future trainings.



A Matrix Project Team supports collaboration in teaching and research around geospatial technologies. Images courtesy of Geospatial Innovation Facility.