

Job Title: Postdoctoral Fellow in Geospatial Data Analytics

(Last Updated: 3/24/2022)

Research Objective

This project is to conduct research on the design and development of tools, models and workflows for geospatial data management, analysis and visualization on the Spatial Data Lab (SDL) platform, which is a core infrastructure for case-based study and training. The project is a joint initiative between Harvard University's Center for Geographic Analysis, Knime, and Future Data Lab, as part of the NSF funded Spatiotemporal Innovation Center's research portfolio. The project's objective is to enable researchers to share their spatial data with others online, conduct spatial data analysis with GIS and statistics tools on the cloud, and develop workflow-based data-driven study cases. The project also includes training programs on spatiotemporal data analysis for economic, social, public health, urban planning and other research subjects.

Position Duties

Project Management (40%)

- Identify new scientific initiatives and investigative opportunities
- Design, manage, and conduct Lab projects related to GIS and spatial data analysis
- Analyze and summarize research data and synthesize conclusions
- Build and maintain infrastructure as needed to support center operations
- Coordinate the creation and delivery of online spatial data services
- Develop grant proposals for external funding support

Development (40%)

- Coordinate the spatial data development
- Develop the online tools for data management and analysis
- Develop workflow-based case studies for data analysis
- Develop brochures, information packages, and online resources for users

Training (20%)

- Offer research training programs for students and researchers
- Provide support for the research team members

Position affiliation

The position is sponsored by the NSF Industry–University Cooperative Research Centers (I/UCRC) Program in the Spatiotemporal Innovation Center at the Center for Geographic Analysis (CGA) of Harvard University. The candidate will have space assigned at the CGA and attend group meetings and related activities with other research sites and collaborating

sponsors. The appointment is for one year with possibility of renewal based on satisfactory performance and continued availability of funding.

Basic Qualifications

Doctoral degree in geographic information science or a related field.

PLEASE NOTE: If you have obtained your Ph.D. in the past 12 months you must be able to provide a certificate of completion from the degree-granting institution OR a letter from the institute's registrar stating all requirements for the degree have been successfully completed and should verify the date the degree has been or will be conferred. No exceptions.

Additional/Preferred Qualifications

Experience with Python, R, and SQL. Strong understanding of geospatial data structure and database standards. Knowledgeable in spatial analysis methodologies and at least one major application field. Proficient with common GIS and statistical software. Hands-on experience with web-based platform development (Java, HTML5, JavaScript and CSS). Experience with workflow tools (KNIME), PostGIS, GeoNode, Django, GeoServer, OpenLayers, ExtJS, GeoNetwork, GDAL and jQuery are strongly preferred. Chinese language skill is a plus.

Must have superior technical skills, attention to detail, and the ability to function as a contributing team member. Must have strong documentation and communication skills. Must be able to collaborate effectively with researchers across organizational structures and across knowledge domains.

Incumbent will work remotely based on Harvard University's COVID-19 response policy until CGA/IQSS on-campus operations resume. Work must be performed within the US. Individuals located in the US working outside of MA must acknowledge to Harvard in writing that after the interim pandemic policy ends, the employee must relocate to MA and their campus work location.

Employees will have federal and MA state taxes withheld.

J-1 Research Scholar visa sponsorship may be available in limited circumstances to individuals already in the US on a visa, depending on their specific immigration status.

Application Procedure

PLEASE DO NOT APPLY ONLINE.

Send curriculum vitae, statement of research interests, and names and contact information for three references to Wendy Guan (wguan@cga.harvard.edu). Research papers (up to three) are welcome but optional. Review of applications will begin immediately and end when the position is filled.

Only applicants who follow these instructions will be considered.

Additional Web Position Listing Information

Harvard University is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions, or any other characteristic protected by law.