Full-time GIS Programmer Consultancy

**Employer:** Center for International Earth Science Information Network (CIESIN), Columbia University  
**Location:** Lamont-Doherty Earth Observatory (Rockland County, NY) or virtual/remote  
**Timeframe:** November 1, 2021 (or sooner) to June 30, 2022  
**Job Type:** Full-time (40 hrs/ week)

**Summary:**
GRID3 (Geo-Referenced Infrastructure and Demographic Data for Development) works with countries to generate, validate and use geospatial data on population, settlements, infrastructure, and subnational boundaries. GRID3 is partnering with governments across sub-Saharan Africa to increase the number of children vaccinated, improve access to schools, identify geographic gaps in financial services, fill data gaps in population censuses, improve municipal planning, and enhance COVID-19 response.

Under GRID3, the GIS Programmer will support complex geostatistical data processing tasks and workflow development by solving moderately complex problems. In addition, he/she will develop data visualization dashboards and tools to represent complex spatial interactions and patterns. The contractor will contribute with the production of core spatial data layers (settlements, infrastructure, and boundaries), as well as provide support for the integration of spatial data layers into online data platforms. He/she will support the development of documentation in the form of technical briefs, training materials, and metadata, and will make substantial contributions with GRID3’s knowledge base related to geospatial data use and integration in the form of online curriculum and other outreach materials.

**Responsibilities include:**

- Supporting complex geostatistical data processing tasks and workflow development related to the production, validation, and curation of GRID3 core data spatial layers (settlements, boundaries, and infrastructure data points) in up to ten middle- or low-income countries.
- Supporting and contributing to the design, scripting, and implementation of monitoring and data visualization tools, dashboards, and online platforms (e.g. ESRI Hub, Shiny-based dashboards).
- Contributing to GRID3’s knowledge base related to geospatial data use and integration by developing content for GRID3 online curriculum and outreach materials.
- Supports the development of documentation of data processes in the form of technical briefs, white papers, webinars and other training materials, as well as metadata.
- Gives presentations, participates on calls, and answers technical questions related to GRID3 data processing workflows.
- Works in coordination with other staff at CIESIN in order to successfully accomplish project's milestones and deadlines.
Minimum Qualifications:
Bachelor's degree in Geography, Geographic Information or related field, and at least four years of professional experience combining geographic applications and/or training; producing complex GIS data analyses, manipulations, and/or integrations; and programming/ automation of workflows and visualizations using Python and/or R languages is required.

Proficiency in ESRI software, platforms, and applications (e.g. ArcGIS Desktop, ArcGIS Pro, ESRI Hub) is also required, as is excellent verbal and written communication skills in English.

Preferred Qualifications:
- Knowledge of other mapping tools, software and applications is an advantage.
- Experience in metadata and documentation development preferred.
- Previous working experience in development-type projects is considered an asset
- French proficiency is considered a plus.

Other Requirements:
Must have excellent communication and interpersonal skills, be attentive to details and well-organized. Must be able to work well in multicultural and interdisciplinary teams.

Please submit an application, including a resume, a cover letter and a quotation with a daily rate (inclusive of taxes and other fees), to grid-consultants@ciesin.columbia.edu no later than Sunday, October 3, 2021. Interested applicants are encouraged to apply early, as review of applications will begin immediately.