www.datadriven.yale.edu

Call for Data-Driven Yale Research Associate: Quantitative Analyst/Programmer

General Purpose

The Yale Data-Driven Environmental Solutions Group (Data-Driven Yale) -- a joint research initiative between the Yale School of Forestry and Environmental Studies and Yale-NUS College Singapore -- is seeking to hire a full-time Quantitative Analyst/Programmer to begin the 2017-18 academic year. The chosen candidate will contribute to a range of projects aimed to bring quantitative rigor and analysis to environmental policymaking. Research projects include building databases and utilizing big data techniques to evaluate a range of environmental issues and policies, including urbanization, climate change, energy, and air pollution. Our work has been published in high-profile academic journals, including *Nature* and *Nature Climate Change,* and has been featured in popular media, including *The Economist, The New York Times, The Atlantic*, and *Scientific American*, among others.

Background of Data-Driven Yale

Data-Driven Yale uses cutting edge data analytics to develop solutions to the world's environmental problems. Launched in 2015, the research group is an interdisciplinary collaboration of policy experts, data scientists, visual designers, and interactive programmers at the Yale School of Forestry and Environmental Studies and Yale-NUS College, Singapore.

Position details

The Quantitative Analyst/Programmer will be expected to contribute to many or all of Data-Driven Yale's quantitative projects, which may include:

- The development and maintenance of open-source geospatial calculation tools utilizing GIS (QGIS or ArcGIS) in a BASH environment utilizing command-line tools (GDAL/OGR/GRASS);
- Development and maintenance of database tools written in open source languages (PostgreSQL, SQLAlchemy, SQLite, etc.);
- Statistical analysis and programming in R;
- Front-end programming of data visualizations and web-based tools;

- Presentation of data and research findings in attractive, web accessible visualizations, and preparing data for front-end web developers.

Essential Duties
- Designs, plans, implements and evaluates complex multifaceted research projects/systems/tools, including method development, adaptation and validation.
- Collaborates with PI to define research endeavors and the development of research hypothesis and approach.
- Solves complex methodology, protocol, procedural and research problems through design of techniques, procedures and policies that will achieve research goals.
- Investigates, analyzes and evaluates complex data, data collection systems and methods to reach scientific conclusions and ensures the integrity of research data.
- Prepares scientific reports and papers for research proposals and published reports.
- May perform other duties as assigned.

Education and Experience
- Bachelor's or Master's Degree in a scientific discipline (e.g., applied math, statistics, computer science) and three years of experience or an equivalent combination of education and experience.

Skills and Abilities
- Demonstrated ability to program in desired languages (e.g., R, Python, etc.) to build analytic tools and databases to support the group's quantitative research.
- Leadership and project management experience. Knowledge of data-gathering techniques, and comfort working with data and statistical systems.
- Excellent interpersonal and communication skills. Ability to work collegially and effectively with colleagues with a broad range of professional experience.
- Ability to research, write and manage projects with minimal supervision, to work under time constraints and meet deadlines, and to balance competing responsibilities.
- Demonstrated ability to think critically and creatively when confronted with new challenges.

To apply, send a resume, cover letter, and work samples (e.g., Github page) to amy.weinfurter@yale.edu.