
Job Title	Research Assistant
PVN ID	BA-1712-002246
Category	Research
Location	BARUCH COLLEGE
Department	CUNY Institute for Demographic Research
Status	Part Time
Hourly Rate	\$18.00-\$23.00
Hour(s) a Week	0.00-19.00
Closing Date	Feb 21, 2018 (Or Until Filled)

General Description

This work will focus on spatial analysis of population change with respect to climate change and the built-environment. The research team will produce spatially delineated estimates of urban change. We will use demographic, socioeconomic, and a variety of environmental data to accomplish this, and a variety of spatial and statistical modeling techniques. We will characterize urban change by generating estimates and forecasting change (urban in-migration, built-up area change, urban fertility and mortality change, and consequences of that change) for the US, and most developing countries for as many years since 1990 as the census and survey data can facilitate. Estimates of urban extent change will use a variety of satellite data products (such as GHSL, VIIRS, GUF, among others). To understand the climate vulnerability, we will produce estimates of migrants-at-risk in newly settled areas and by various types of climate-related risks (low elevation coastal zones, in flood- or drought-prone areas, and long-run changes and anomalies in temperature, precipitation and humidity) in destination cities or urban agglomerations, and where possible characterize the climate-related drivers of out-migration areas. These findings will be presented globally at professional meetings and in academic and policy outlets for broad dissemination. Must be able to work in teams as well as be self-directed.

Other Duties

Individual must be able to work at many scales (local-area, continental and global). Some portion of the research will utilize complex historical spatial units for Mexico, the US, and India. Duties will include searching for, acquiring, and cleaning census/survey and spatial data sets (both in vector and raster format), and then processing them analytically (both spatially and in analytical tables). Work must be at a high level conceptually as well as technically.

Qualifications

Advanced spatial analytic skills, including scripting, thematic map making, and spatial and statistical analysis in both vector and raster formats.

- Advanced knowledge of python, R, or preferably both.
- If no knowledge of R, use of at least one statistical package (Stata, SPSS, SAS).
- Attention to detail.
- Ability to write technical documents, produce analytical tables, graphs, and polished maps; and to contribute to published papers.
- Masters in GIS, spatial data sciences, or closely-related field.
- PhD/DPh candidates will be considered but applicants must address fit to position noting that the work is all project-based.
- Experience working with (cleaning, transforming, analyzing) demographic data (census or survey, preferably both) and remote sensing data.
- The potential to learn and collaborate with colleagues new statistical or spatial databases.
- Prior research experience.

Also desirable:

- Knowledge (or interest in) at least one type of climate-related data or hazard;
- Understanding of policy applications;
- Knowledge of open-source software tools and programs for spatial analysis and database management (SQLite, PostgreDQL, etc.)