COMPUTATIONAL DEMOGRAPHER

Req #: 207603

Department: CENTER FOR STUDIES IN DEMOGRAPHY AND ECOLOGY

Job Location: Seattle Campus

Posting Date: 06/23/2022

Closing Info: Open Until Filled

Salary: Salary and benefits are competitive. Salary is commensurate with qualifications and experience.

Shift: First Shift

Notes: As a UW employee, you will enjoy generous benefits and work/life programs. For a complete description of our benefits for this position, please visit our website, click here.

The College of Arts & Sciences (CAS) is one of the largest academic units on the UW Seattle campus, employing over 1400 tenure-track and research faculty, in 43 departments and centers, and generating an average $120 million dollars in sponsored research each year. CAS is comprised of 4 major divisions – Arts, Humanities, Social Science and Natural Science – whose cutting-edge research spans from malaria treatment to solar energy to human rights. CAS is home to diverse music, art, drama, dance, digital arts academic units and degrees, and runs one performance hall (Meany) and two major museums (Henry Art and Burke). CAS academic programs support more than 22,000 undergraduates and 2600 graduate students. The College occupies over 1 million square feet of space spread across campus and off-campus facilities in more than 50 buildings.

As a UW employee, you have a unique opportunity to change lives on our campuses, in our state and around the world. UW employees offer their boundless energy, creative problem solving skills and dedication to build stronger minds and a healthier world.
UW faculty and staff also enjoy outstanding benefits, professional growth opportunities and unique resources in an environment noted for diversity, intellectual excitement, artistic pursuits and natural beauty.

The Center for Studies in Demography and Ecology (CSDE; https://csde.washington.edu/) seeks a Computational Demographer to join its Scientific Core. This position will have a joint role and complementary responsibilities within the UW eScience Institute. CSDE is a population research center at the University of Washington funded by a P2C grant from the Population Dynamics Branch at the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), matching funds from the College of Arts and Sciences, the UW Provost’s Office, eScience Institute, other UW Schools and Colleges, as well as faculty affiliate grant proposals. CSDE is uniquely situated at the UW to foster cutting-edge population research, including our partnership with the Northwest Federal Statistical Research Data Center (NWFSRDC), the UW Data Collaborative, an active demographic graduate training program, and initiatives on campus linking and sharing administrative data and driving the formation of interdisciplinary teams together for scientific, evidence-based policymaking. To further foster scholastic connections, CSDE maintains active linkages with other research centers on campus, including the eScience Institute, the Center for Social Science Computation and Research (CSSCR), the Center for Statistics in the Social Sciences (CSSS), the West Coast Poverty Center, and the Population Health Initiative, among many others.

CSDE and the eScience Institute are excited to partner on this position to support the increasing demand for computational demographers across our organizations and more broadly at the UW. The mission of the eScience Institute is to empower researchers and students in all fields to answer fundamental questions through the use of large, complex, and noisy data. As the hub of data-intensive discovery on campus, the Institute leads a community of innovators in the techniques, technologies, and best practices of data science and the fields that depend on them. The Institute does this by bringing expertise and helping researchers at UW to leverage data science tools, methods, and best practices in their research and in their grant proposals. As data science experts and, in collaboration with faculty and partner organizations (like CSDE), the Institute advances the state-of-the-art in data science methods and in domain sciences that benefit from them.

This position provides methodological support to faculty and graduate students studying demographic processes and their connections to population health dynamics, as well as leadership on innovative new projects consistent with the scientific emphases of CSDE and eScience. It requires broad social science research skills, advanced computational skills, and an orientation towards service and facilitation of research. The successful candidate will provide support for researchers in the areas of responsible conduct of research, transparent science, data construction, statistical and/or machine learning training, demographic forecasting and probabilistic modeling. We are especially interested in candidates with experience in the application of machine learning, natural language processing, and probabilistic linkages for relational, high-dimensional data for population science projects. Emphasis in these areas will benefit faculty using novel data sources (e.g. social media data, narratives in administrative records) to capture features of population processes generally absent or underrepresented in current data. Accordingly, this position requires exceptional interpersonal and communication
skills; flexibility, adaptability and the desire to learn new skills as needed; and the ability to work as part of a team. We are looking for someone who is able to provide assistance to all levels of researchers and to do outreach that encourages best practice demographic research methods and successful grant proposals. These interpersonal skills are equally as important as the technical skills for this position.

In addition to research support functions, CSDE research staff are expected to develop their own area of expertise as well as peer networks within and outside of the UW. They participate significantly in research design and execution in collaboration with affiliate faculty, and serve substantial roles on sponsored projects. The Computational Demographer is expected to take a leadership role in identifying opportunities for, and development of, independent and collaborative research on topics consistent with the broad scientific goals of CSDE.

The Computational Demographer will be expected to serve as a technical mentor for the annual Data Science for Social Good (DSSG) summer program hosted by the eScience Institute. Graduate and undergraduate students from any university apply to DSSG and are then formed into teams which work on a data science project mentored by collaborators from the university, nonprofits, or government. The Computational Demographer will have a role in selecting a project that enhances either demographic methods or applied demography, and will mentor students working to complete the project objectives throughout the 10-week summer program.

Along with mentoring the DSSG students, the computational demographer would also augment existing activities for CSDE trainees, particularly building on activities initiated as part of the NIH T32 in Data Science and Demography Training (DSDT) program through presentations, short courses, and support for demography broadly at UW, such as the Computational Demography Working Group. The person's expertise would also enhance activities in the development core by providing data handling expertise, reviewing grant applications, or helping write portions of the data science approach for external proposals.

The Computational Demographer, if interested, may also participate in the leadership of the Northwest Federal Statistics Research Data Center (NWFSRDC). The NWFSRDC is a secure enclave where approved researchers can access highly confidential data collected by federal agencies. If a candidate has experience working in an FSRDC environment and has interest in providing leadership for CSDE around these kinds of research infrastructure and related research projects, they should indicate that interest in their application letter for this position.

The first year of the position is supported 100%, jointly by CSDE and eScience. After the first year of this position, the Computational Demographer will be supported by eScience at 30% of their FTE, CSDE at 20-40% of their FTE (depending on their administrative roles), and expected to generate the remaining 30-50% of their FTE through participation on collaborative grants or other funding sources. This model has worked well with existing staff at both CSDE and eScience, as it encourages outreach, professional growth, and exposure to new topic areas. This position is ideal for a talented person with a PhD seeking a challenging and rewarding non-faculty academic research position, which offers ongoing opportunities for professional development including conference travel, training, and co-authorship in publications.
DUTIES:
- 25% - Identify opportunities for collaborative research and take a leadership role in all stages of the conceptualization of research topics, identification and development of appropriate data, design and execution of strategies to analyze these data, and dissemination of results to the scientific community with professional presentations and publications.
- 20% - Support for the entire research cycle including study design and grant proposal writing; data collection, data management, data analysis, and data archiving; and manuscript writing and publication
- 20% - Provide consulting and mentorship in statistical analysis, computational techniques and applications, research methodology, study design and implementation, and data management and archiving.
- 10% - Provide workshops on statistical programming, data management, and data archiving to faculty and graduate students
- 5% - Provide support for development of grant proposals
- 5% - Provide outreach to the demography community
- 5% - Develop new skills and areas of expertise as needed to support faculty research
- 5% - Facilitate team communication and collaboration
- 5% - Perform other duties as required, or if interested, including the possible leadership of the Northwest Federal Statistics Research Data Center (NWFSRDC).

MINIMUM REQUIREMENTS:
- Education requirement: Master’s in Statistics, Demography or equivalent coursework,
- Experience requirement: Four or more years experience in a related area, or equivalent combination of education/experience
- Programming Experience in Python and R
- Cloud Computing Experience
- Experience with design and use of relational databases
- Experience with a variety of data linkage approaches
- Teaching experience
- Experience working on a team, desire to work collaboratively
- Ability to communicate effectively with all levels of researchers
- Experience working with faculty and graduate students
- Demonstrated ability to work independently, take initiative, learn new skills, and do outreach
- Experience with writing papers for publication
- Experience writing grant proposals (in whole or part)

DESIRED QUALIFICATIONS:
- Doctoral-level education in social and behavioral science research methodology, or equivalent
- Experience conducting social science research
- Experience leveraging “Big Data” for scientific research (Data Science)
- Experience with other statistical software (e.g., Mplus, ArcGIS, ATLAS.ti)
- Experience with Natural Language Processing
- Experience with qualitative research, particularly the analysis of qualitative data
- Experience in visual displays of data
Application Process:
The application process for UW positions may include completion of a variety of online assessments to obtain additional information that will be used in the evaluation process. These assessments may include Work Authorization, Cover Letter and/or others. Any assessments that you need to complete will appear on your screen as soon as you select “Apply to this position”. Once you begin an assessment, it must be completed at that time; if you do not complete the assessment you will be prompted to do so the next time you access your “My Jobs” page. If you select to take it later, it will appear on your "My Jobs" page to take when you are ready. **Please note that your application will not be reviewed, and you will not be considered for this position until all required assessments have been completed.**

Applicants considered for this position will be required to disclose if they are the subject of any substantiated findings or current investigations related to sexual misconduct at their current employment and past employment. Disclosure is required under Washington state law.

Committed to attracting and retaining a diverse staff, the University of Washington will honor your experiences, perspectives and unique identity. Together, our community strives to create and maintain working and learning environments that are inclusive, equitable and welcoming.

The University of Washington is a leader in environmental stewardship & sustainability, and committed to becoming climate neutral.

The University of Washington is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, gender expression, national origin, age, protected veteran or disabled status, or genetic information.

To request disability accommodation in the application process, contact the Disability Services Office at 206-543-6450 or dso@uw.edu.

**COVID-19 VACCINATION REQUIREMENT**

Governor Inslee's Proclamation 21-14.2 requires employees of higher education and healthcare institutions to be fully vaccinated against COVID-19 unless a medical or religious exemption is approved. Being fully vaccinated means that an individual is at least two weeks past their final dose of an authorized COVID-19 vaccine regimen. As a condition of employment, newly hired employees will be required to provide proof of their COVID-19 vaccination. View the Final candidate guide to COVID-19 vaccination requirement webpage for information about the medical or religious exemption process for final candidates.