The Department of Biomedical Informatics and Medical Education in the School of Medicine at the University of Washington is recruiting for 4 postdoctoral fellowship trainee positions to begin in September, 2018. Three of the positions provide two years of funding and one of the positions provides one year of funding. These positions are supported by our Biomedical and Health Informatics Training Grant funded by the National Library of Medicine (NLM). The fellowship includes a stipend, tuition and health insurance benefits. Postdoctoral Fellowship Trainees are required to take 4 courses from the BHI core curriculum, in addition to leading and participating in colloquia. The postdoctoral fellowship trainees also work closely with faculty in a particular area of research, deepening their knowledge in biomedical and health informatics.

At the University of Washington, diversity is integral to excellence. We value and honor diverse experiences and perspectives, strive to create a welcoming and respectful learning environments, and promote access, opportunity and justice for all. 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.

Interested candidates can find application instructions: http://bime.uw.edu/apply-to-post-doctoral-program/

**We have highlighted some current research opportunities for our postdoctoral trainees below:**

David Crosslin, PhD
Assistant Professor

Dr. Crosslin's team's research is focused on the area of translational bioinformatics, with a combination of computational tools development and bioinformatics research, specifically integrating genomics data into the electronic health record for clinical decision support. His research program is in line with advancing the national electronic health information infrastructure in support of personalized medicine. The team can discover genetic variation associated with disease mined from electronic health records, prioritize them using bioinformatic tools, and communicate these ideas and their significance to clinicians through computational tools. One such study that funds Dr. Crosslin's research program is the Electronic Medical Records & Genomics (eMERGE) Network. This National Human Genome Research Institute (NHGRI)-funded Network currently comprises multiple mixed-ancestry US biobanks, with genotyped and/or sequence, linked to electronic medical records (EMRs). This project is on the forefront of precision medicine and discovery using mined phenotypes. Having access to these data through the eMERGE Network has provided excellent data resources for research and education, as well as supporting national collaborations.

Dr. Crosslin is looking for individuals with strong computational and statistical skills, along with solid understanding of biology and health. Other skills desired include strong communication skills, both written and oral, and a natural curiosity for science and problem-solving. While he does have a collaborative group, he is looking for individuals with a willingness to work independently as you build a foundation for your research program. Finally, an appetite for pho will prove beneficial as this seems to be the desired daily lunch destination for the team.

John Gennari, PhD
Associate Professor

Broadly speaking, Dr. Gennari's research interests are in knowledge representation, ontologies, and standards for knowledge sharing, including semantic web technologies. These interests translate into many application areas, including use and reuse of clinical data, knowledge resources for biomedical researchers, and data science in biomedical informatics broadly (reproducibility, standards).

One specific application area for this research is in biosimulation modeling for physiology and pathophysiology. In particular, Dr. Gennari is part of a large, NIH-funded project to promote the reproducibility of biomedical modeling. As part of this project, we are using semantic annotations to

capture the physical meaning of variables in mathematical models of physiology. To promote reproducibility and knowledge sharing, we are encouraging scientists to publish their models using our standard vocabulary (and ontology) for physiology. This work is in cooperation with several scientific journal editors, so that publication of the standard model occurs in parallel with publication of the paper.

Dr. Gennari would welcome post-doctoral scientists to assist with this project and believes it has long-term potential for careers in data science.

Sean Mooney, PhD
Professor
Chief Research Information Officer, UW Medicine

The research group of Sean Mooney is active in the area of biomedical informatics and data science. We are interested in recruiting highly qualified candidates for postdoctoral positions focusing on clinical research informatics in precision medicine and digital health. Areas of interest include quantitative methods for comparing patient similarity using machine learning and real world observational datasets, use of large, realtime electronic health record datasets for public health surveillance and population health, and the integration of innovative datasets, such as social determinants of health and genetic information, into electronic health records for predictive analytics and decision support.

Annie Chen, PhD
Assistant Professor

Dr. Chen seeks postdoctoral fellows who would like to work on research focused on patients' health management behaviors, especially in contexts involving long-term management of chronic conditions and behavioral health. Some of this research involves using qualitative approaches to draw out the richness of patient experience, as well as their information and support needs. Another critical part of this work involves the development of interactive visual analytics platforms. For the latter, the ideal candidate would have ability and enthusiasm for conceptualizing of data and novel ways of interacting with it. Fellows with a wide range of methodological backgrounds are welcome. Skills/experience that are particularly desired include: A. Technical (Python development, Web development, and experience/familiarity with open-source visualization packages such as D3); B. Quantitative: experience with inferential statistics, including but not limited to regression and latent variable modeling; and C. Qualitative. With regard to qualitative methods, Dr. Chen is open to discussion with regards to philosophical and epistemological orientations in the approach.

Neil Abernethy, PhD
Associate Professor

A postdoc working with Dr. Abernethy will study applications of network modeling to diverse biomedical problems of interest to the applicant including biological pathway analysis, infectious disease epidemiology, bibliometrics, operations research and knowledge representation. Areas of research focus may include visualization, analysis under conditions of missing/uncertain data, and machine learning in networks. Applicants with a strong background in CS, mathematics, statistics, informatics, data science, molecular biology, epidemiology, or related fields will be considered.

Gang Luo, PhD
Associate Professor

Dr. Luo has a postdoc position open in machine learning. The postdoctoral fellow will work on automatic machine learning model selection and automatically explaining machine learning classification / prediction results. Candidates should have a PhD in machine learning from computer science or related areas, be

proficient in Java programming, and be familiar with Weka source code. Experience with Spark/Hadoop is a plus.