Postdoctoral Fellow in Imaging Genomics
Shen Lab
Perelman School of Medicine, University of Pennsylvania

Description

Applications are invited for a Postdoc Position in the Shen Lab (https://www.med.upenn.edu/shenlab/) at the Perelman School of Medicine (PSOM) at the University of Pennsylvania. This position will offer opportunities to develop and apply advanced bioinformatics and machine learning (including deep learning) strategies for integrative analysis of multidimensional imaging, omics, biomarker and clinical data, with applications to the study of complex disorders such as Alzheimer's disease (AD).

The following research areas are of particular interest: 1) development of novel informatics methods for integrative analysis of imaging, genetics and transcriptomics data to identify brain imaging genetic associations with evidence manifested in the human brain transcriptome; 2) development of transformative AI approaches for high throughput analysis of next generation sequencing and related AD biomarker and cognitive data in landmark AD biobanks for prediction of disease risk, prognosis and progression, identification of disease subtypes, and better understanding of disease mechanism; and 3) development of innovative translational big data analytic methods to systematically integrate AD biomarker research and systems medicine study, and to identify novel promising targets and drugs for repositioning against AD.

The Shen Lab (https://www.med.upenn.edu/shenlab/) is affiliated with the Department of Biostatistics, Epidemiology and Informatics (https://www.dbei.med.upenn.edu/) and Penn Institute for Biomedical Informatics (http://upibi.org/) at PSOM. The successful candidate will benefit from mentorship of a diverse research team and will be exposed to cutting-edge technology by collaborating on one or more NIH and NSF funded genomic, imaging, and biomedical data science projects.

The University of Pennsylvania, the largest private employer in Philadelphia, is a world-renowned leader in education, research, and innovation. This historic, Ivy League school consistently ranks among the top 10 universities in the annual U.S. News & World Report survey. Penn has 12 highly regarded schools that provide opportunities for undergraduate, graduate and continuing education, all influenced by Penn's distinctive interdisciplinary approach to scholarship and learning.

Penn offers a unique working environment within the city of Philadelphia. The University is situated on a beautiful urban campus, with easy access to a range of educational, cultural, and recreational activities. With its historical significance and landmarks, lively cultural offerings, and wide variety of atmospheres, Philadelphia is the perfect place to call home for work and play. Information about Penn's Biomedical Postdoctoral Programs can be found at https://www.med.upenn.edu/postdoc/.

Qualifications

Requirements include a Ph.D. in computer science, informatics, ECE, BME, biostatistics or related quantitative fields, and a record of academic productivities. Preference will be given to candidates who have experience with advanced techniques for analyzing biomedical data. A strong interest in integrative analysis of multimodal imaging data, high throughput genetics and omics data, and other biomarker data, would be highly desirable, as would solid background in machine learning, deep learning, medical image computing, bioinformatics, network science, and/or programming experience using Python, R, Matlab, C/C++, or other languages.

How to Apply

To apply, please email a letter of motivation, a curriculum vitae, and names and addresses of three references to Dr. Li Shen, li.shen@pennmedicine.upenn.edu (Subject line: Imaging Genomics Postdoc, 2021). The University of Pennsylvania is an equal opportunity employer.