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University of Pennsylvania Wharton School

Department of Statistics & Data Science

Kevin Lin, Ph.D.
Post-doctoral researcher

November 9, 2022

University of Washington
Department of Biostatistics
Hans Rosling Center for Population Health
3980 15th Avenue NE
Seattle, WA 98195

Dear Members of the Search Committee,

I am writing to apply for the Assistant Professor (tenure-track) position in the Department of Biostatistics at the University of Washington. I am a postdoctoral scholar at the Wharton School of Statistics & Data Science at the University of Pennsylvania and completed a Ph.D. in Statistics & Data Science at Carnegie Mellon University. I am working on multimodal statistical theory and methods research to advance developmental biology and cancer therapies, but it is broadly applicable to other fields. I believe my expertise makes me a great fit for the department.

My research is primarily on studying developmental biology (primarily neurogenesis and its relation to autism spectrum disorder) and cancer therapy through matrix factorization and network models. My current research direction is inspired mainly by the recent revolution in multimodal single-cell technology, which is rapidly growing in prevalence in biology but is lacking in statistical tools. My work has been published in various high-ranking journals, such as Science and the Journal of the American Statistical Association. My past and current collaborators include wet-laboratory biologists, clinicians, and statisticians. I plan to continue my existing collaborations and make new ones on projects (including ones outside my current familiarity) that align with my statistical expertise. I hope to contribute significantly to the department's goal to bring in leading statisticians who can develop computational and data-driven techniques to explore multimodal biological problems.

The Department of Biostatistics at the University of Washington is a great fit for me since it displays impressive strengths across various genetic and genomic problems in laboratory and clinical settings. My existing research on single-cell RNA-seq and multiomic analyses for developmental biology and cancer therapy using matrix factorization and network methods fit well with the current faculty members. Additionally, I seek to learn and collaborate on biological directions your department specializes in that complement my research goals. This includes directions such as effectiveness of clinical treatments and vaccines, microbiome research, and biomedical imaging using new methodologies pertaining clinical trials, causal inference, and high-dimensional inference. Your department provides strong collaboration opportunities with researchers at other locations affiliated with the university such as the UW School of Medicine, the Fred Hutchinson Cancer Research Center, the Department of Genome Sciences, and the Center of Clinical and Translational Research. It also has access to essential research resources such as Hyak supercomputing and sequencing cores for collecting biological data such as Northwest Genomics Center. These potential collaboration opportunities and resources are tremendously helpful for my intended research.

I have previously taught many courses, including a course on Statistical Computing (which I had the opportunity to TA and instruct over five semesters, providing insight on how to improve a course) and Statistical Genomics. I have received two different TA-of-the-year awards. I welcome opportunities to teach courses similar to those two, and Ph.D.-level courses about modeling high-dimensional and complex datasets. I have also mentored numerous undergraduates on research projects. Additionally, I am strongly committed to diversity and inclusivity goals. I have partaken in Early Faculty programs to learn teaching strategies to promote inclusivity and been to training sessions regarding mental health. The University of Washington has many outreach programs I would like to help expand (such as the Summer Institutes in Biostatistics and UW's Washington Research Foundation Fellowships). It also offers opportunities for me to improve my teaching even more through the Center for Teaching and Learning Resources. I am confident I would enrich the department's teaching and inclusivity goals.

Thank you in advance for your consideration. My application package includes my CV, research, teaching, and diversity statements, and contact information for three references. Do not hesitate to let me know if you have any questions or if I can provide any additional materials. For correspondence, please contact me at kevinL1@wharton.upenn.edu.

Sincerely,

Kevin Lin

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