Shih-Ni Prim
3335 Leesville Towns Ct.
Raleigh, NC 27613

Dear Hiring Manager,

I am writing to express my interest and qualifications for the position of PhD Intern—AI & Data Analytics in Math, Stats, and Data Science. A second-year PhD student, I am currently enrolled in the Department of Statistics at North Carolina State University with a full-time status. My cumulative GPA as of today is 4.0. Interested in developing methods informed by applied research, I have been working on building a statistical model to find causal effects in spatial data, which can benefit environmental and climate research and, more broadly, any data with spatial correlation. As I start to think of real-world applications for my research, I have come to realize that I would like my future career to have positive impacts on the world, and I would like to be part of something larger than myself. As my career goals become clearer, I started exploring the various institutions I could work at and realized that a place like PNNL perfectly fits my personality, work style, values, and goals.

By summer 2024, I will have completed my coursework, including five core, fundamental statistical inference classes (statistical theory and methods), three advanced theory and computation courses, and three electives. I have taken electives such as Bayesian Inference and Causal Inference at the PhD level and Multivariate and Longitudinal Data Analysis and Statistical Learning at the master's level. Besides knowledge in statistical inference, I have strong coding skills, mainly in R and Python. I have also used SAS, Matlab, and Java, although much less frequently. I program almost daily, and my research project requires me to build models from scratch, using only the most basic packages or libraries. For my current research project, I am building models in R that analyze complex data with spatial confounding using powerful tools such as spectral methods, tensor regression, and shrinkage priors. I have also done data analysis projects that require me to do data cleaning, exploratory data analysis, and regression analysis using ready-made packages.

In short, I am interested in continuing to combine Bayesian, spatio-temporal, and causal inference models to solve real world problems related to energy, environment, and climate, but I am also open to assisting with any research at PNNL. Having mainly worked in the Bayesian framework, I am particularly interested in uncertainty quantification. I am eager to learn from others and be part of a team that does meaningful and impactful research. I look forward to having a conversation with you on what I can contribute to Pacific Northwest National Laboratory.

Sincerely,

Shih-Ni Prim