

Paul-Hieu V. Nguyen

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- EDUCATION** **University of Wisconsin–Madison**, Madison, WI
Ph.D., Statistics, August 2022 - Present (Anticipated 05/27)
Reed College, Portland, OR. B.A., Mathematics, May 2022
Thesis: “Inference for Random Forests”
- SKILLS** **Programming:** R, C++, Python, Latex, SQL. **Software:** Stan, Git
Interests: Statistical machine learning, Bayesian Modeling, Uncertainty Quantification, Simulation
- PUBLICATIONS** **Nguyen, P-H.V.**, Yee. R, Deshpande, S.K. (2025). “Oblique Bayesian additive regression trees”. *Transactions on Machine Learning Research*.
Wojcik O.C., Olson S.D., **Nguyen, P-H.V.**, McConville K.S., Moisen G.G. and Frescino T.S. (2022). “GREGORY: A Modified Generalized Regression Estimator Approach to Estimating Forest Attributes in the Interior Western US.” *Frontiers in Forests and Global Change*.
- EXPERIENCE** **Research and Teaching Assistant**, University of Wisconsin - Madison, Aug 2022-Present
- Designed and published an oblique extension of Bayesian Additive Regression Trees (BART), increasing predictive accuracy across broad set of datasets. Presented work at several statistics conferences.
 - Developed a compositional Bayesian framework for multi-output predictions, enhancing model interpretability and uncertainty calibration. Presented work at sports analytics conference, winning 1st place in CMU research competition.
 - Built data pipelines combining real estate and energy data to generate robust predictions for energy outputs for US housing stock, quantifying uncertainty from multiple sources.
 - Led discussion sections and graded for introductory and graduate level statistics courses, including Bayesian modeling and data science courses
- NSF REU Fellow**, Pennsylvania State University, May 2021 - Aug 2021
- Investigated breaches of anonymity in popular natural language conversational dataset. Used statistical and Natural Language Processing techniques to identify a case study of personal information in sample.
- Research Assistant, Economics, Statistics**, Reed College, Jan 2020 - Aug 2020
- Compared several statistical learning methods, including random forests and boosted trees, to classical econometric techniques in prediction of health and economic data. Found notable improvements in prediction through use of tree-based models.
 - Developed and published statistical model to improve forestry yield estimation using satellite and plot data, resulting in lower variance estimates than current model for 71% of counties in sample. Demonstrated results in simulation study.
- Iowa Biostatistics Summer Fellow**, University of Iowa, May 2019 - Aug 2019
- Developed spatiotemporal statistical model to predict incidence of Lyme disease in Iowa using health claims data.
- HONORS & AWARDS**
- 1st place, 2025 Carnegie Mellon Sports Analytics Conference Reproducible Research Competition - Open Track, Oct 2025
 - Advanced Opportunity Fellowship, University of Wisconsin–Madison, Aug 2022
 - 2nd, June 2020 Undergraduate Research Project Competition, Sep 2020
 - 2020 Economics Summer Research Mintz Award, Reed College, Aug 2020
 - Commendation for Excellence, Reed College, Aug 2019, 2020, 2021, 2022
- SERVICE** Statistics Graduate Student Association Social Chair and Secretary, University of Wisconsin–Madison 2023-Present