Patrick Vossler

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Employment

2022- **Stanford University - Stanford Law School**, Stanford, CA
Postdoctoral Researcher, hosted by Prof. Daniel Ho

Education

2017-2022 **University of Southern California - Marshall School of Business**, Los Angeles, CA
Ph.D. Statistics

Thesis: "Nonparametric Ensemble Learning and Inference"
Advisors: Prof. Yingying Fan and Prof. Jinchi Lv

2013-2017 **University of Southern California**, Los Angeles, CA
B.S. Economics and Mathematics

Graduated with Honors, Magna Cum Laude

Publications and Preprints

Du, X., Fan, Y., Lv, J., Sun, T. and Vossler, P. (2022+). **Dimension-Free Average Treatment Effect Inference with Deep Neural Networks**.
- Major revision at the *Journal of Econometrics.*

Chi, C.-M., Vossler, P., Fan, Y. and Lv, J. (2021). **Asymptotic Properties of High-Dimensional Random Forests**. *The Annals of Statistics.*

Demirkaya, E., Fan, Y., Gao, L., Lv, J., Vossler, P. and Wang, J. (2022). **Optimal Nonparametric Inference with Two-Scale Distributional Nearest Neighbors**. *Journal of the American Statistical Association.*

Phillips, C., Shah, P. and Vossler, P. (2021) **Immigrants, Intersectionality and the Politics of Substantive Representation**. *Journal of Women, Politics & Policy.*

Awards

Travel Grant, National Science Foundation (2022)

Amount: $1,000
Transportation and lodging costs awarded to attend and present at the 2022 Quality and Productivity Research Conference.

Hannan Graduate Student Travel Award, Institute of Mathematical Statistics (2020)

Amount: $800
Funds the travel expenses of students who are graduate students statistics or probability to present their research at an IMS sponsored or co-sponsored meeting. One of 16 students worldwide to receive this award.

James S. Ford Award, USC Marshall School of Business (2020)

Amount: $5,000
Awarded to third year Ph.D. students based upon their scholastic performance and the quality of their dissertation abstract. One recipient per year.

Student Opportunities for Academic Research (SOAR), USC Dornsife (2014-2016)

Funding for undergraduates for participation as a research assistant in a faculty member's project during the spring or fall semester. Received the award for five different semesters.

Talks / Conferences

INFORMS 2022 (Invited Session)

Session: "Robust, Interpretable, and Fair Machine Learning"
Paper Presented: "ODTlearn: A Package for Learning Optimal Decision Trees for Prediction and Prescription"

Quality and Productivity Research Conference (QPRC 2022)

NSF Travel Grant Award
Paper Presented: "Optimal Nonparametric Inference with Two-Scale Distributional Nearest Neighbors"

Cornell ORIE Young Researcher Workshop (2021)

Paper Presented: "Asymptotic Properties of High-Dimensional Random Forests"

Industry Experience

2015-2017   **Omaze,** Los Angeles, CA
Data Science Intern

- Liased with senior members of the marketing and product teams to create automated reports of social media ad conversion.

- Built connected data science pipeline with user analytics data.

- Deployed Javascript user interface A/B tests and analyzed subsequent data from the Apache Spark cluster with Scala and Python to optimize website layout for increasing user conversion rate.

Teaching Experience

2019, 2020   **Instructor and Teaching Assistant**, BUAD 312: Statistics and Data Science for Business

- Core class for business undergraduate students that is an advanced alternative to the regular business statistics core class.

- Instructor rating of 4.2 out of 5 (averaged over two sections).

- Developed a `buad312data` R package to make it easier to share data sets with students.

- Built a tool for grading RMarkdown problem set submissions. Used by teaching assistants in spring 2020.

Skills

- **Programming Languages**: R, Python, Javascript, SQL, C++, Scala, Stata, Apache Spark