RYAN THEISEN

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EDUCATION

University of California, Berkeley, Berkeley, CA
Ph.D. in Statistics, 2018-2023. Thesis: Beyond Worst-Case Generalization in Modern Machine Learning, Advised by Michael W. Mahoney

Arizona State University, Tempe, AZ
M.A. in Mathematics, 2017-2018. Thesis: Covergence Results for Two Models of Interaction, Advised by Sebastien Motsch
B.S. in Mathematics and Economics, 2013-2017. Phi Beta Kappa, Summa Cum Laude, Outstanding Graduate in both Mathematics and Economics

EXPERIENCE

Machine Learning Scientist, Harmonic Discovery Inc., San Francisco
2021-Present

Graduate Student Researcher, University of California, Berkeley
2018-2023

Deep Learning Research Intern, Salesforce Research, Palo Alto
Summer 2019, Summer 2020

Machine Learning Team Lead, Luminosity Lab, Arizona State University
Fall 2016-Spring 2018

Senior Data Analyst, Amazon.com, Seattle/Phoenix
Summer 2016-Fall 2017

PAPERS

[1] **Theisen, R.**, Kim, H., Yang, Y., Hodgkinson, L., Mahoney, M.W. *When are Ensembles Really Effective?* Neural Information Processing Systems (2023).

[2] Yang, Y., **Theisen, R.**, Hodgkinson, L., Gonzalez J.E., Ramchandran, K., Martin, C.H., Mahoney, M.W. *Test Accuracy vs. Generalization Gap: Model Selection in NLP without Accessing Training or Testing Data.* ACM SIGKDD Conference on Knowledge Discovery and Data Mining (2023).

[3] Yang, Y., Hodgkinson, L., **Theisen, R.**, Zou, J., Gonzalez J.E., Ramchandran, K., Mahoney, M.W. *Taxonomizing Local Versus Global Structure in Neural Network Loss Landscapes.* Neural Information Processing Systems (2021).

[4] **Theisen, R.**, Wang, H., Varshney L. R., Xiong, C., Socher, R. *Evaluating State-of-the-Art Classification Models Against Bayes Optimality.* Neural Information Processing Systems (2021).

[5] **Theisen, R**., Klusowski, J. M., Mahoney, M. W. *Good Classifiers are Abundant in the Interpolating Regime.* 24th International Conference on Artificial Intelligence and Statistics (2021).

[6] Cao F., Motsch, S., Reamy, A., **Theisen, R**. *Asymptotic Flocking for the*

Three-Zone Model. Mathematical Biosciences and Engineering (2020).

[7] **Theisen, R.**, Klusowski, J. M., Wang, H., Keskar, N., Xiong, C., Socher, R. *Global Capacity Measures for Deep ReLU Networks via Path Sampling.* ArXiv preprint 1910.10245 (2019).

[8] Weber, D., **Theisen, R.**, Motsch, S. *Deterministic Versus Stochastic Consensus Dynamics on Graphs.* Journal of Statistical Physics (2019).

TEACHING	**University of California, Berkeley**

University of California, Berkeley
Graduate Student Instructor, Stat 157: Deep Learning
Graduate Student Instructor, Stat 154: Modern Statistical Prediction and Machine Learning
Graduate Student Instructor, Stat 89A: Linear Algebra for Data Science

Arizona State University
Teaching Assistant, ECN 312: Intermediate Microeconomics
Teaching Assistant, ECN 212: Principles of Microeconomics

SERVICE

Volunteer, Kino Border Initiative, Nogales, Mexico
2012-Present

AWARDS AND HONORS

Dean's Medal, Mathematics, ASU, 2017 Awarded as outstanding graduating senior in School of Mathematical and Statistical Sciences.
Dean's Medal, Economics, ASU, 2017 Awarded as outstanding graduating senior in Department of Economics.
Moeur Award, ASU, 2017 Granted University-wide academic distinction at graduation.
J.P. Morgan Chase Scholar, ASU, 2016 Awarded fellowship for top economics undergraduates.
Fulbright Summer Scholarship, University of Bristol, UK, 2014 UK Summer Institute for Young American Student Leaders.

SKILLS AND INTERESTS

Programming: Python, R, SQL, LaTeX.
Languages: English, Spanish (elementary proficiency).
Research Interests: Theoretical Machine Learning, Deep Learning, Statistics, Optimization.
Personal Interests: Photography, Green Bay Packers, Arsenal FC, Rock Climbing, Hiking.