Jerry Chee

Department of Computer Science
Cornell University

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Jerry-Chee.github.io

Education

Cornell University — Ithaca, NY
Ph.D. in Computer Science — 2024 (expected)

University of Chicago — Chicago, IL
B.S. in Computational and Applied Mathematics — 2017

Working Papers

Exact inference with stochastic gradient descent
– with Panos Toulis

Understanding and detecting convergence for stochastic gradient descent with momentum
– with Ping Li

Conference Papers

Convergence diagnostics for stochastic gradient descent
AI and Statistics, 2018 (*oral*) – with Panos Toulis

Presentations

AI and Statistics Oral Presentation — Apr 2018
Convergence diagnostics for stochastic gradient descent

Joint Statistics Meeting — Jul 2019
Statistical properties of stochastic gradient descent

Research Experience

Ping Li, Baidu — Bellevue, WA
Cognitive Computing Lab — Mar - Jul 2019
Accepted to the research internship program. Graph neural networks multi-task learning for classification tasks. Extended work on convergence diagnostic to variants of stochastic gradient descent with momentum and gradient compression.

Panos Toulis, University of Chicago, Chicago, IL
Booth School of Business — Jan 2017 - Feb 2019
Statistical analysis with stochastic gradient descent (SGD). Developed a statistical diagnostic test that declares convergence of SGD, drawing upon theory from stopping times in stochastic approximation. Currently developing a large scale statistical inference procedure with SGD.

John Lafferty, University of Chicago — Chicago, IL
Department of Statistics — Oct 2015 - Jun 2016
Topic decomposition for statistics arxiv papers. Built tf-idf and language model document similarity scoring systems between arXiv statistics papers and Wikipedia statistics articles. Part of a project on statistical machine learning for advanced search of mathematical and scientific literature.

Burhaneddin Sandikci, University of Chicago — Chicago, IL
Booth School of Business — Jun - Aug 2015

Designed and implemented a distributed memory parallelized version of an upper bounding method utilizing scenario tree decomposition for stochastic multi-stage integer programs. Built with C and MPI.

Professional Experience

McKinsey & Company Boston, MA
Analytics Fellow Oct 2017 - Feb 2019
Led several data science initiatives in predictive maintenance for the network technology division of a top telecommunications company. Utilized a cost (of true positive, false positive, etc.) analysis for selecting the prediction target and implementation strategy which maximized business impact and modeling feasibility. Built classification models for network and customer service use cases.

Uptake Chicago, IL
Data Science Intern Sep 2016 - Jan 2017
Enhanced the reporting and dashboard tools which served as a project management system for the data science team. These tools tracked project status, updates, and milestones.

Nielsen Chicago, IL
Data Science Intern Jun - Aug 2016
Evaluated several data science tools based on user interface, statistical capability, computing scalability, and cost for integration into Nielsen's data science toolkit. Built set top box data transformation pipeline for customer segmentation analysis.

Other Information

Programming: R, Python, C (MPI)
Languages: Chinese (Limited oral proficiency)