ALEX CHIN

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I'm a statistician and research scientist interested in tackling challenging data science problems and building impactful product solutions. My expertise is in blending academic and methodological tools with practical engineering and applied data science knowledge. My academic work addresses the inferential challenges posed by complex data sources by drawing upon tools from machine learning, causal inference, and theoretical statistics. On the engineering front, I am interested in building scalable, end-to-end, production-quality data science software. In March 2019 I completed my PhD in Statistics at Stanford University with a thesis on causal inference under interference.

PROFESSIONAL EXPERIENCE

Data Science R&D Intern, *Civis Analytics, Chicago, IL*   *Summer 2018*
- Developed and engineered scalable statistical methodology for measuring the effectiveness of political ads

Core Data Science Intern, Experimental Design and Causal Inference, *Facebook, Menlo Park, CA*   *Summer 2017*
- Developed optimal design and analysis tools for experimentation on the Messenger and WhatsApp platforms
- Built regression-adjusted estimators into Facebook's system for adaptive experimentation and Bayesian optimization

Modeling Science Intern, *Quantcast, San Francisco, CA*   *Summer 2016*
- Built improvements into the core ML product for large-scale classification in display advertising, including a MapReduce EM algorithm

RESEARCH

A. Chin, D. Eckles, and J. Ugander, *Evaluating stochastic seeding strategies in networks*
- arXiv preprint 1809.09561, September 2018.

A. Chin, *Regression adjustments for estimating the global treatment effect in experiments with interference*
- arXiv preprint 1808.08683, August 2018.

A. Chin, *Central limit theorems via Stein's method for randomized experiments under interference*
- arXiv preprint 1804.03105, April 2018.

Automatic randomization inference in networks, with Dean Eckles, in progress.

A survey review of interference, with Guillaume Basse, in progress.

EDUCATION

Stanford University, Ph.D. Statistics   *March 2019*

- Thesis: "Modern statistical approaches for randomized experiments under interference"
- Passed qualifying exams (August 2015) and filed for candidacy (June 2016)

North Carolina State University, B.S. Mathematics and B.S. Economics, minor in Linguistics   *May 2014*

- Valedictorian and *summa cum laude*
- Park Scholarship (four-year full scholarship and enrichment program)
- Phi Beta Kappa (inducted as a sophomore)
- College of Sciences Outstanding Scholarship Award
- Lafayette College Mathematics REU, Summer 2013
- Indiana University Mathematics REU, Summer 2012
- Budapest Semesters in Mathematics, Spring 2012

TECHNOLOGIES

- Programming tools: Python, TensorFlow, PyTorch, sklearn, R and tidyverse, Stan, SQL and databases, Java, C/C++, Unix/Linux, MATLAB, Julia, Hadoop/MapReduce
- General statistics: Statistical modeling and inference, Monte Carlo methods, optimization, graph and network analysis
- Causal inference: Experimental design, A/B testing, observational studies, interference and peer effects
- Machine learning: Deep learning, adversarial networks, convolutional networks, artificial intelligence, Bayesian and variational methods

TEACHING EXPERIENCE

- Stats 305A: PhD Linear models and Bayesian statistics, Autumn 2018
- Stats 305C: PhD Multivariate statistics, Spring 2018
- Stats 305A: PhD Linear models, Autumn 2017
- Stats 231/CS229T: Theory of machine learning, Spring 2017
- Stats 200: Introduction to statistical inference, Autumn 2016
- Stats 50: Mathematics of sports, Spring 2016
- Stats 216: Introduction to statistical learning, Winter 2016
- Stats 60: Introduction to statistical methods, Autumn 2015
- Stats 216: Introduction to statistical learning, Summer 2015
- Stats 60: Introduction to statistical methods, Spring 2015
- Stats 191: Introduction to applied statistics, Winter 2015