Christopher Tran

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https://christran16.github.io/

Ph.D, Computer Science, University of Illinois at Chicago

Research

My research lies in the space of machine learning and causal inference, with a focus on heterogeneous treatment effect estimation: how treatment affects individuals differently. I am particularly interested in applications of my work in social science and personalized privacy assistants.

Education

Ph.D., Computer Science
Advised by Dr. Elena Zheleva
Department of Computer Science, University of Illinois at Chicago   *Aug 2016 - Aug 2022*

M.S., Computer Science
In fulfillment of Ph.D. candidacy requirements
Department of Computer Science, University of Illinois at Chicago   *Aug 2016 - Dec 2020*

B.S., Computer Science
Department of Computer Science, Delaware State University   *Aug 2012 - May 2016*

B.S., Mathematics
Department of Mathematical Sciences, Delaware State University   *Aug 2012 - May 2016*

Publications

C. Tran, E. Zheleva, "Improving Data-driven Heterogeneous Treatment Effect Estimation Under Structure Uncertainty." *To be published in ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD 2022*. [PDF]

C. Tran, E. Zheleva, "Heterogeneous Peer Effects in the Linear Threshold Model." *Proceedings of the 2022 AAAI Conference on Artificial Intelligence, AAAI 2022*. [PDF]

Y. He, **C. Tran**, J. Jiang, K. Burghardt, E. Ferrara, E. Zheleva, K. Lerman. "Heterogeneous Effects of Software Patches in a Multiplayer Online Battle Arena Game," *16th International Conference on the Foundations of Digital Games, FDG 2021*. [PDF]

M. T. Khan, **C. Tran**, S. Singh, D. Vasilkov, C. Kanich, B. Ur, E. Zheleva. "Helping Users Automatically Find and Manage Sensitive, Expendable Files in Cloud Storage," *30th USENIX Security Symposium, USENIX 2021*. [PDF].

C. Tran, E. Zheleva. "Heterogeneous Threshold Estimation for Linear Threshold Modeling." *International Workshop on Mining and Learning with Graphs, MLG 2020*, Contributed Talk. [PDF].

M. Roshanaei, **C. Tran**, S. Morelli, C. Caragea, E. Zheleva. "Paths to Empathy: Heterogeneous Effects of Reading Personal Stories Online." *IEEE Conference on Data Science and Advanced Analytics, DSAA 2019*. [PDF].

M. Mondal, G. Yilmaz, N. Hirsch, M. T. Khan, M. Tang, **C. Tran**, C. Kanich, B. Ur, E. Zheleva, "Moving Beyond Set-It-And-Forget-It Privacy Settings on Social Media." *26th ACM Conference on Computer and Communications Security, CCS 2019*. [PDF].

C. Tran, E. Zheleva, "Learning Triggers for Heterogeneous Treatment Effects." *Proceedings of the 2019 AAAI Conference on Artificial Intelligence, AAAI 2019*. [PDF] [Code].

Researcher
Smart Information Flow Technologies (SIFT)   *July 2022 - Present*

Research Intern
Smart Information Flow Technologies (SIFT)
Supervisors: Dr. Phillip Walker, Dr. Scott Friedman, Dr. Dan Thomsen May 2019 - Nov 2019
- Modeling and identifying factors for gender bias
- Learning behaviors in swarm agents
- Novel recommendation for documents

AI Intern
STATS Perform
Supervisor: Dr. Jennifer Hobbs   *May 2018 - Aug 2018*
- Task: Predict ball ownership and ball trajectory using raw tracking data
- Leverage deep recurrent neural networks, and feature construction

Research Assistant
University of Illinois at Chicago
Research advisor: Dr. Elena Zheleva   *Aug 2017 - Present*
- Causal inference
- Heterogeneous (individual) treatment effects
- Triggers for heterogeneous treatment effects

Teaching Assistant
University of Illinois at Chicago
Introduction to Machine Learning (CS 412)   *Fall 2018, Spring 2021*
Instructor: Dr. Elena Zheleva
- Editing and creating new additions for homework assignments, grading homework and exams, answering questions on Piazza, holding regularly scheduled office hours

Mathematical Foundations of Computing (CS 151)   *Spring 2017, Fall 2017, Spring 2018*
Instructors: Dr. John Lillis, Dr. Gonzalo Bello
- Holding multiple lab sessions per week, grading homework and exams, answering questions on Piazza, holding regularly scheduled office hours

Program Design II (CS 141)   *Summer 2017*
Instructor: Dr. John Lillis
- Grading homework and exams, assisting during lab and class sessions, holding regularly scheduled office hours

Introduction to C/C++ with MATLAB (CS 109)   *Fall 2016*
Instructor: Dr. John Bell
- Leading multiple lab sessions per week, grading homework and exams, answering questions on Piazza, holding regularly scheduled office hours

Conference reviewer

- AAAI conference on Artificial Intelligence (AAAI) (2021)
- The Web Conference (2021)
- International Conference on Web Search and Data Mining (WSDM) (2021)
- SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) (2020)

Awards

- UIC College of Engineering Graduate Student Award for Exceptional Research Promise (2021)
- UIC Computer Science Graduate Student Award (2016)