

Logan Crowl

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Education

Carleton College, Northfield, MN 2018

B.A. in Mathematics/Statistics, *summa cum laude*

- GPA: 3.97/4.00
- Senior Thesis: “Training Machines to See What You See: Applications of Statistical Learning Methods for Pattern Detection in Scatterplots”
- Relevant Coursework: Real Analysis, Abstract Algebra, Linear Algebra, Advanced Statistical Modeling, Applied Regression Analysis, Time Series Analysis, Stochastic Processes, Probability, Number Theory, Combinatorics, and Game Theory

Research Experience

University of Chicago Crime Lab and Center for Applied AI September 2019 - Present

Data Scientist and Research Assistant

Working for Professor Jens Ludwig and Professor Sendhil Mullainathan

Research Contributions:

“Algorithmic Identification of Under-Reported Domestic Violence”

Assisting Jens Ludwig, Sendhil Mullainathan, and Ziad Obermeyer

- Status: In Progress
- Guided study through IRB review and data acquisition
- Developed data processing and modeling pipeline to recognize patterns in X-rays of injuries sustained in domestic violence incidents

“Analyzing Racial Disparities in Pretrial Decisions and the Jail Population in New Jersey”

Assisting Ashesh Rambachan and Jonathan Roth

- Status: In Progress
- Analyzed data in study on racial disparities in the New Jersey criminal justice system and economic definitions of systemic bias in decision-making pipelines

“Algorithmic Behavioral Science: (Semi-)Automatically Produced Insights about Human Behavior”

Assisting Jens Ludwig and Sendhil Mullainathan

- Status: Results and paper are being circulated in advance of submission for publication
- Constructed dataset of mugshots and court records scraped from online sources
- Trained convolutional neural networks using mugshots to detect and characterize facial features associated with harsher pretrial decisions by judges

“Machine-Learning Tests for Effects on Multiple Outcomes”

Assisting Jens Ludwig, Sendhil Mullainathan, and Jann Spiess

- Status: Revision requested (last revised May 2019)
- Developed new implementations of machine learning-based methodology for testing effects in randomized controlled trials with many outcomes

Publications

“BiochemAR: An Augmented Reality Educational Tool for Teaching Macromolecular Structure and Function” (with Rou-Jia Sung, Andrew Wilson, Stanley Lo, Joseph Nardi, Katie St. Clair, and Jane Liu). 2019. *Journal of Chemical Education*, 97 (1), 147-153.

Professional Experience

New York Yankees, Bronx, NY August 2018 - August 2019

Quantitative Associate–Baseball Operations

- Conducted statistical research projects on baseball strategy and player valuation using advanced statistical models and simulations
- Provided recommendations and evaluations of players and teams to front office executives to guide roster construction, in-game strategy, and organizational philosophy

Benchmark Analytics, Chicago, IL

June - December 2017

Research Analyst

- Analyzed police early intervention systems to direct data collection, model building, and software design for a technology startup promoting police accountability and officer wellness

Teaching Experience

Introduction to Computer Science, Code in Place (Online) Summer 2020
Section Leader

Applied Regression Analysis, Carleton College (Undergraduate) Spring 2017
Teaching Assistant to Professor Katie St. Clair

Introduction to Statistics, Carleton College (Undergraduate) Winter 2017
Teaching Assistant to Professor Katie St. Clair

Honors and Accomplishments

Summa Cum Laude (top 2% of class or 1 of 11 students), Carleton College 2018
Phi Beta Kappa as a third-year student (1 of 3 third-year students selected) 2017
Patricia V. Damon Endowed Scholarship, Carleton College 2017
Dean's List (top 10% of previous year's class), Carleton College 2015, 2016, 2017

Volunteer Experience

Justice, Equity, Diversity, and Inclusion Committee Member, Crime Lab 2019-Present
Student Departmental Advisor for the Math & Statistics department, Carleton College 2017-2018
Statistical consultant for local organizations, Carleton College 2015-2018

Technical Skills

- Extensive programming, data analysis, and model building experience in **R** and **Python**
- Other programming skills: Git, Anaconda, SQL, AWS, C, Wolfram Mathematica, and LaTeX
- ML/AI skills: convolutional neural networks, generative adversarial networks, natural language processing models, boosted trees, random forests, hierarchical models, penalized regression models, generalized linear models, LDA, QDA, support vector machines, and clustering models

References

Professor Jens Ludwig
Faculty Director of the Crime Lab
Email: jludwig@uchicago.edu

Professor Sendhil Mullainathan
Director of the Center for Applied AI
Email: Sendhil.Mullainathan@chicagobooth.edu