Ari Anisfeld

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EDUCATION

University of Chicago
PhD Public Policy *2019 -*
Coursework: Empirical Analysis I and III, Optimization Conscious Econometrics, Applied Microeconometrics, Topics in Computer Security
MS Computational Analysis and Public Policy with Honors *2016 - 2018*
Coursework: Statistical Machine Learning, Deep Learning, Introduction to Natural Language Processing, Machine Learning for Public Policy, Applied Econometrics I and II, Applications of ML to the Empirical Sciences
Grinnell College *2005 - 2009*
BA History with Honors

RESEARCH AND ANALYTICS EXPERIENCE

University of Chicago Chicago, IL
Research Assistant to Anjali Adukia *June 2020 - present*
Research Assistant to Peter Ganong and Pascal Noel *June 2018 - June 2019*
Research Assistant to Yana Gallen *June 2017 - August 2018*

Center for Data Science and Public Policy Chicago, IL
Research Assistant *February 2018 - June 2018*

· Wrote tests and documentation for bias and fairness audit toolkit for testing bias in predictive systems

Presence Health Chicago, IL
Analytics Programmer *June 2017 - August 2017*

· Built multivariate regression functionality into analytics platform focused on community health.

TEACHING EXPERIENCE

University of Chicago Chicago, IL
Teaching Assistant (indicates Head TA)*

· Applied Econometrics II (Koichiro Ito, Spring 2019); Data Skills for Public Policy* (Peter Ganong, Fall 2018, Spring 2020); Machine Learning and Policy (Jens Ludwig, Spring 2018); Statistics for Data Analysis II (Austin Wright and Ingvil Gaarner, Winter 2018); Statistics for Data Analysis I* (Dan Black and Amir Jina, Fall 2017);

Instructor

· Harris Coding Lab (Summer+Fall 2020, Fall 2019)

SKILLS

Computational *Advanced*: R, Python; *Intermediate*: SQL, Julia, Stata, ArcGIS, HTML/CSS/JS, Spark
Computational *data science*: tidyverse, data.table, pandas, sklearn; *web dev*: Django, Flask, Rails

PRESENTATIONS

2018 *MetroLab Network*; *Chicago Booth Research Professional Seminar*

Research agenda

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My broad research interests center on how social policy (education, housing and so forth) create or dismantle structural inequities. This is closely tied to the economics of AI, because machine learning is changing the way decisions are made, how resources are allocated and even what information people have at their disposal. Will inequality be exacerbated by models trained on data that reflects historic biases or can we take advantage of the potentially more transparent decisions and more purposefully address structural inequality?

One way to make progress on these huge questions is through field experiments with organizations that use ML in their decision making process. The work would include auditing current practice on appropriate fairness metrics based on the real outcome measures of people affected by the decisions. Then, experimenting with new models that, in theory, perform better on the fairness metrics. In work with the Center for Data Science and Public Policy, I helped develop software to audit the bias in different models. Some models have similar performance on outcome metrics (e.g. accuracy) but are better or worse on fairness metrics that matter for the use case.[1] The experiment would randomize over models (at different locations) and we measure the equity impacts on important outcomes.

Additionally, I'm excited to help advance the frontier in methods that apply machine learning. For example, text contains rich data that is highly unstructured. In unpublished work with Yana Gallen, we built a learner that took in a job description and determined if the employer is advertising a job where "flexibility" is a benefit. For a new project with Anjali Adukia, I hope to measure skills that are generally considered unobservables from student essays to provide a different angle to understanding the returns to education.

[1] see the fairness tree `http://www.datasciencepublicpolicy.org/projects/aequitas/`