Agata Foryciarz

Email: agataf@stanford.edu
https://agataf.github.io/

WORK EXPERIENCE

Postdoctoral Researcher, Stanford Department of Epidemiology, Stanford, CA · 2025-Present

EDUCATION

Ph.D., Computer Science, **Stanford University** · 2025
Research focus: evaluating health equity consequences of medical algorithms

B.S.E., Computer Science (*magna cum laude*), **Princeton University** · 2018
Minor in Statistics and Machine Learning

HONORS AND AWARDS

Stanford Center on Longevity New Map of Life Postdoctoral Fellowship	2025
Perspektywy Women in Tech Poland Summit: Top 10 Women in AI (category: Fighting AI Bias)	2022
Stanford Technology & Racial Equity Graduate Fellowship	2021
Forbes Poland 25 Under 25 in Science	2021
McCoy Family Center for Ethics in Society Graduate Fellowship	2020
Nomination to Sigma Xi, a Scientific Research Honor Society	2018
Best Paper in Mathematics & Computer Science, Yale Undergraduate Research Conference	2017

PUBLICATIONS

Foryciarz A, Alarid-Escudero F, Basel G, Cusick M, Phillips RL, Bazemore A, Adams AS and Rose S. A microsimulation-based framework for mitigating societal bias in primary care data. *Under revision.*

Foryciarz A, Gladish N, Rehkopf DH, Rose S. Incorporating area-level social drivers of health in predictive algorithms using electronic health record data. *Journal of the American Medical Informatics Association.* 2025 Jan 20; ocaf009.

Foryciarz A, Pfohl SR, Patel B, Shah N. Evaluating algorithmic fairness in the presence of clinical guidelines: the case of atherosclerotic cardiovascular disease risk estimation. *BMJ Health & Care Informatics.* 2022 Apr 1;29(1):e100460-e100460.

Xu Y, **Foryciarz A**, Steinberg E, Shah NH. Clinical utility gains from incorporating comorbidity and geographic location information into risk estimation equations for atherosclerotic cardiovascular disease. *Journal of the American Medical Informatics Association.* 2023 May 1;30(5):878-87.

Pfohl SR, Zhang H, Xu Y, **Foryciarz A**, Ghassemi M, Shah NH. A comparison of approaches to improve worst-case predictive model performance over patient subpopulations. *Scientific Reports.* 2022 Feb 28; 12(1):3254.

Pfohl SR, Xu Y, **Foryciarz A**, Ignatiadis N, Genkins J, Shah NH. Net benefit, calibration, threshold selection, and training objectives for algorithmic fairness in healthcare. *Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency.* 2022 Jun 21:1039-1052.

Pfohl SR, **Foryciarz A**, Shah NH. An empirical characterization of fair machine learning for clinical risk prediction. *Journal of Biomedical Informatics.* 2021 Jan 1;113:103621.

G Campagna, **Foryciarz A**, Moradshahi M, Lam MS. Zero-shot transfer learning with synthesized data for multi-domain dialogue state tracking. *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics.* 2020 Jul;122-132.

Research in Progress

Foryciarz A, Srivathsa N, Sedan O, Rosas LG, Rose S. *A participatory approach for understanding social drivers of chronic kidney disease progression.*

We are conducting a participatory research study to understand specific ways in which social factors (e.g. housing, transportation, adverse experiences, access barriers, direct discrimination) impact chronic kidney disease patients' ability to manage their condition. In a series of focus groups (completed in October and November 2024) and model building workshops (completed in January 2025), participants were guided through a multi-step process of constructing a causal loop diagram representing social factors and their interactions.

Policy briefs

Pfohl RS, **Foryciarz A** and Shah NH. [Promoting Algorithmic Fairness in Clinical Risk Prediction](). Stanford University Human-Centered AI Institute (HAI) Policy Brief (2022).

Contributions to policy reports

[Input on the European Commission White Paper "On Artificial Intelligence – A European approach to excellence and trust"](). Stanford University Wonks and Techies, 2020.

[Who (really) targets you? Facebook in Polish election campaigns](). Panoptykon Foundation, ePaństwo Foundation, Sotrender, 2020.

[Sztuczna Inteligencja Non-Fiction](). Panoptykon Foundation, 2020.

[The AI Index 2019 Annual Report](). AI Index Steering Committee, Human-Centered AI Institute, Stanford University, 2019.

Patents

Foryciarz A, Dean DA, II. [Generation and use of simulated genomic data.]() US Patent no. US10629292B2.

Talks and presentations

A microsimulation-based framework for mitigating societal bias in primary care data.
- Invited Session at the Joint Statistical Meetings 2024 ([Paper Presentation]())
- RAND Statistics Group (Seminar)
- International Conference on Health Policy Statistics 2025 (Paper Presentation)

Clinical Impact of Satisfying Group Fairness Constraints in Revised Pooled Cohort Equations.
- American Medical Informatics Association 2021 Virtual Informatics Summit (Podium Abstract)

Fairness in machine learning for health.
- Women in Cyber Security Scotland 2021 (Talk)

AI non-fiction - współczesne wyzwania i nadzieje
- Digital Cultures 2020, Instytut Adama Mickiewicza ([Online seminar]())
- Strefa Psyche Uniwersytetu SWPS 2020 ([Online seminar]())
- Konferencja Sektor 3.0 2020 ([Seminar]())

Where do Algorithmic Accountability and Explainability Frameworks Take Us in the Real World?
- The ACM Conference of Fairness, Accountability and Transparency 2020 ([Conference Session]())

Mitochondrial Size Gradients in Cortical Neurons Revealed by 3D Electron Microscopy
- Society for Neuroscience Conference 2018 ([Poster]())

Identification of allele-specific eQTLs using a Poisson generalized linear model

- Workshop for Women in Machine Learning at the Conference on Neural Information Processing Systems 2017 ([Poster Presentation](#))

Popular Press

Articles
- Kalluri R, Gillespie L, **Foryciarz A**, Elhai W, Srivastava S, Panezi A, Einstein L. [If We're Not Careful, Tech Could Hurt the Fight against COVID-19](#). *Scientific American Blog*, 2020.
- **Agata Foryciarz**, Daniel Leufer, Katarzyna Szymielewicz. [Black-Boxed Politics: Opacity is a Choice in AI Systems](#). *Medium* and [*Internazionale*](#) (Italian translation), 2020.

Interviews
- Dane, uprzedzenie i krzywda z algorytmu, *Sztuczna Inteligencja*, 2020 ([Newspaper interview](#))
- Czy sztuczna inteligencja może być obiektywna? *Człowiek 2.0, Radio Tok FM*, 2019 ([Radio interview](#))
- AI Non-Fiction. *Panoptykon 4.0, Radio Tok FM* ([Radio interview](#))

Teaching

Teaching Assistant, Stanford CS 281: Ethics of Artificial Intelligence	2023
Instructor and course developer, Introductory Python course, Koło Programistek Miejskich	2018

Industry Experience

Data Science Intern, The New York Times, New York, NY	2018
Machine Learning Intern, Autodesk, San Francisco, CA	2017
Bioinformatics Intern, Seven Bridges Genomics, Cambridge, MA	2016

Reviewing and Service

Reviewer, ACM Conference on Fairness, Accountability and Transparency	2022
Reviewer, Conference on Health, Inference, and Learning	2022
Founder & co-organizer, Computing & Society, Stanford University *A graduate reading and advocacy group*	2019-2021
Reviewer, BMJ Health Care & Informatics	2021
Reviewer, AMIA Virtual Informatics Summit	2021
Co-organizer & reviewer, NeurIPS Resistance AI Workshop	2020
Co-organizer, HAI-AI Index Workshop Measurement in AI Policy	2019
Reviewer, NeurIPS Women in Machine Learning Workshop	2017

Skills

Programming: Python, SQL, R, Java, C
Technologies: GCP, Git, PyTorch, scikit-learn, Docker
Data Analysis: statistical analysis, Bayesian modeling, machine learning, parallel computing
Languages: Polish (Native), English (Bilingual), Spanish, Portuguese (working proficiency)