

JONAS METZGER

Palo Alto, CA 94304, USA | jonasmetzger.com | metzgerj@stanford.edu | +1 650-441-6852

EDUCATION

Stanford University

PhD Economics & PhD Minor Computer Science

Advisors: Guido Imbens, Susan Athey, Jann Spiess

Awards: B.F. Haley and E.S. Shaw Dissertation Fellowship, Stanford Data Science Scholarship, Sean Buckley Memorial Award (best 2nd yr paper), Gerhard Casper Stanford Graduate Fellowship

Stanford, USA

09/2018 – 09/2024

London School of Economics

MSc Econometrics and Mathematical Economics (with Distinction)

London, UK

08/2017 – 06/2018

University of Mannheim

BSc Economics (with Distinction)

Mannheim, DE

09/2014 – 08/2017

PhD RESEARCH

Machine Learning, Econometrics, Quantitative Macroeconomics, Game Theory

- [Subsidy Treaties](#) (under review): I show that game-theoretic issues of emissions treaties can be avoided by exploiting the unique cost structure of renewable energy. Combining economic theory and various macroeconomic data sources to build a quantitative model of the electricity sectors of US/EU/CHN/IND, I find a novel treaty would unlock a NPV of ~\$8T.
- [Adversarial Estimators](#) (2023, *ASSA Meetings of The Econometric Society*): I develop the statistical theory of adversarial estimation (connecting causal inference methods, GANs, RL algorithms), proving convergence rates and asymptotic normality even if deep neural nets are used, and motivating novel, more efficient estimation objectives
- [WGANs for the Design of Monte Carlo Studies](#) (2021, *Journal of Econometrics*): evaluating causal inference methods requires synthetic data containing counterfactuals; GANs can make evals more realistic by tying observables to real data

EMPLOYMENT

Stanford University

Post-Doctoral Researcher, Stanford Data Science and Graduate School of Business

Stanford, USA

09/2024 – ongoing

Instilled.ai

Cofounder (and CEO) of a robotics startup that briefly existed during my PhD

Palo Alto, USA

03/2024 – 06/2024

- Raised (+later returned) \$500k from Y-Combinator to build imitation-learning-as-a-service platform for bimanual robots
- Wrote a script to finetune a VLM into a diffusion policy, on action sequences from the Open-X-embodiment dataset
- Built a [browser-based VR-teleop data collection stack](#) via WebXR, WebRTC and a Rust-based IK-solver (via WASM)
- Found a first customer and distribution partner (Schunk SE)

Microsoft Research, New England

Machine Learning Researcher (Intern)

Cambridge, USA

06/2021 – 09/2021

- Developed a novel objective to estimate causal parameters under (conditional) independence restrictions using adversarial networks, with applications to e.g. nonparametric instrumental variable problems; mentored by Greg Lewis

QuantCo

Machine Learning Researcher (Intern)

Berlin, DE

06/2018 – 08/2018

- Introduced deep learning and multi-task learning to demand elasticity estimation; built method-agnostic model eval tool

VOLUNTARY WORK

Inclusive Mentorship in Data Science - BIODS 360

Mentor to local community college student

Stanford, USA

01/2023 – 9/2023

- Helped student navigate temporary homelessness, college transfer applications, and an autism detection ML project

Transatlantic Sync Conference

Director Policymaker AI Bootcamp

Palo Alto, USA

03/2019 – 10/2019

- Organized a workshop educating policymakers on opportunities and challenges around AI policy

Stanford German Student Association

Vice President

Stanford, USA

08/2019 – 08/2020

- Point of contact between anything German and the wider campus community – e.g. organized the Stanford Oktoberfest

Mannheim Investment Club e.V.

Senior Analyst and part of organizing team

Mannheim, DE

02/2015 – 10/2015

- Helped setting up the student managed fund (planning of general structure, distribution of tasks, etc.)

ADDITIONAL INFORMATION

Languages: Fluent in English and German

Programming: Experienced in Python (deep learning in PyTorch, data science); some familiarity w JavaScript, R, Matlab

Other Projects: Designed and simulated an [analog neuromorphic circuit](#) training a MLP; built a [protocol for cryptographic attestation](#) of https data for smart contracts; built a chrome extension controlling a web-browser via a LLM

Interests: Skiing, soccer (won Stanford Intramural Championship 2021), Geopolitics, Physics