CHRISTOPHER ZOSH

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PROFESSIONAL SUMMARY

Versatile Ph.D. economist with expertise in structural modeling, simulation, and applied microeconometrics. Combines advanced Python programming skills with extensive experience developing and estimating game-theoretic and traditional economic models, supported by strong foundations in causal inference (RD, DiD, IV) and panel-data regression methods.

EDUCATION AND HONORS

Binghamton University, State University of New York

Doctor of Philosophy in Economics *May 2025*

Concentration in modeling behavior (game theory, simulation) and model estimation

Cumulative GPA: 3.66/4.00

Binghamton University, State University of New York

Bachelor of Arts in Economics and Mathematics (dual major), Magna Cum Laude *May 2018*

Overall GPA: 3.62/4.00

GPA in Major (Economics): 3.93/4.00

EXPERTISE AND TECHNICAL SKILLS

- **Analytical Skills:** Economic modeling (game theoretic, simulation, and traditional economic modeling), structural estimation, causal inference methods (IV, RDD, and DiD regression), panel methods, learning models, and optimization algorithms (example guides **here**).
- **Software and Programming Skills:** Python programming, statistical programming software (R, Stata), microsoft office, Git/Github, and 3D-modeling software (AutoCAD, Inventor, Revit)
- **Professional Skills:** Project ownership, cross-functional collaboration and communication, technical and academic writing, quantitative and qualitative research design, stakeholder engagement, and consensus building across competing interests.

PROFESSIONAL EXPERIENCE

Watts Architecture and Engineering **Buffalo, NY**

Electrical Designer *February 2019 - August 2019*

- Designed and delivered technical documents (blueprints) for public sector infrastructure projects.
- Coordinated with engineers and project managers to ensure technical accuracy, regulatory compliance, and timely project completion.
- Communicated with stakeholders to assess project requirements and adapt designs to evolving needs.

Frey Electric Construction Co Inc **Buffalo, NY**

Electrical Designer *June 2018 – November 2018*

- Developed detailed construction drawings in 3D space, identifying efficient routing solutions for electrical systems.
- Coordinated with multidisciplinary teams to resolve spatial conflicts between electrical and competing building systems.

TEACHING AND MENTORSHIP EXPERIENCE

Empire State University **Remote**

Adjunct Professor of Economics *September 2025 – Present*

- Deliver and manage fully remote undergraduate economics courses, distilling quantitative concepts into clear, practical insights.
- Mentor and advise diverse students in virtual settings, offering individualized feedback to support learning and skill development.

RESEARCH EXPERIENCE

Evolving Sustainable Institutions in Agent-Based Simulations with Learning

Accepted to the Journal of Economic Behavior and Organization (JEBO)

- Extended game-theoretic analysis with simulation to explore how optimal resource regulatory policy is impacted by learning behavior.
- Found similarity-based learning, a well-known biological principle, produces graduated sanctions, consistent with empirical case studies.

On the Preservation of Input/Output Directed Graph Informativeness under Crossover

Accepted to Complexity

- Developed a novel optimization algorithm for a broad class of recurrent networks, addressing a literature gap identified in prior work.
- Leveraged both mathematical proofs and Monte-Carlo simulation to demonstrate key properties of produced solutions.

Monte-Carlo Tests for Identification and Validation of Stochastic Agent-Based Models

Submitted to the Journal of Artificial Societies and Social Simulation (JASSS)

- Developed a Monte-Carlo-based framework for evaluating properties of nonlinear and dynamic models necessary for credible estimation.
- Introduced a novel Monte-Carlo test to disentangle imprecision arising from model and estimation stochasticity versus sampling variation.