

William Brasic

Fourth-Year Doctoral Student in Economics

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Department of Economics
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EDUCATION

The University of Arizona

Ph.D., Economics

May 2027

Tucson, AZ

University of Nevada – Las Vegas

M.S., Data Intelligence and Applied Economics

May 2022

Las Vegas, NV

University of Nevada – Las Vegas

B.A., Economics (Magna Cum Laude)

August 2020

Las Vegas, NV

PROFESSIONAL EXPERIENCE

Analysis Group

Associate Extern

Summer 2025

Boston, MA

- Selected as 1 of 14 externs (4% acceptance rate) for Analysis Group's inaugural Associate Externship Program
- Conducted qualitative research on a high-profile legal complaint involving a prior carriage dispute, synthesizing key facts and litigation context
- Analyzed subscriber and financial data using Excel and R to estimate damages, uncover trends, and deliver actionable insights to support strategic recommendations during a mock case
- Shadowed Associates to gain direct exposure to economic consulting workflows, including live case discussions, client deliverables, and team collaboration

RESEARCH FIELDS

Industrial Organization; Digital Economics and AI; Health Economics; Antitrust and Competition Policy

RESEARCH PAPERS

Working Papers

When Asymmetric Pricing Algorithms Collide

Industrial Organization; Digital Economics and AI; Antitrust and Competition Policy

- Algorithms are increasingly superseding humans in the pricing of goods and services, enabling firms to adapt to shifting market dynamics with greater precision. Despite the widespread adoption of these algorithms, there remains a scarcity of knowledge regarding their specific configurations and their impact on competition. I assess whether asymmetric reinforcement learning-based pricing algorithms can learn to engage in tacit collusion within a repeated Bertrand-Markov pricing environment. My analysis reveals that diverse algorithms can indeed learn to tacitly collude, consistently setting and sustaining prices above competitive levels. This practice results in enhanced firm profitability, while concurrently diminishing consumer welfare.

Algorithmic Pricing, Recommendation Systems, and Competition

Industrial Organization; Digital Economics and AI; Antitrust and Competition Policy

- AI-powered pricing algorithms raise concerns about supracompetitive outcomes without explicit coordination. Meanwhile, digital platforms use recommendation systems (RSs) to influence product visibility. This paper models Bertrand-Markov price competition in a differentiated product market with heterogeneous consumers, where both sellers' pricing and the platform's recommendations are AI-driven. The findings show that RSs can autonomously inhibit algorithmic anticompetitive conduct, resulting in prices even below the Bertrand-Nash benchmark. The results hold when the platform only prioritizes profits, as well as with variations in consumer heterogeneity, market conditions, and underlying learning parameters.

Works in Progress

A Dynamic Model of Rational Addiction: Evaluating Tobacco Product Flavor Bans and Nicotine Caps

Industrial Organization; Health Economics; Applied Econometrics

- This paper develops a dynamic model of rational addiction with quasi-hyperbolic discounting to evaluate flavor bans and nicotine caps. Using household-level panel data, I first present reduced-form evidence of habit-persistence, forward-looking behavior, and the short-run effects of statewide flavor bans to motivate the structural model. Then, I estimate the structural model via pseudo-maximum likelihood, and simulate counterfactual policies such as a national flavor ban and the FDA's 2025 proposed nicotine cap, revealing long-run behavioral responses to such policies. The model accounts for nicotine intake along with heterogeneity in flavor preferences and demographics, offering insights into behavioral spillovers and regulatory design.

Financial Literacy and Senior-Aged Food Insecurity

with Courtney Coughenour and Ian K. McDonough

Health Economics; Applied Econometrics

- Food insecurity remains one of the most significant public health concerns in the United States today with this being particularly true for the senior population. Using original survey data collected in Clark County, NV, we investigate the link between financial literacy and senior food security relying on perceived parental financial confidence as an exclusion restriction. Our results indicate that financial literacy broadly, and financial behaviors specifically, can play a critical role in lessening the propensity for a senior household to be classified as food insecure.

RESEARCH ASSISTANTSHIPS

Arizona Residential Utility Consumer Office

Fall 2025; Spring 2026

Research Assistant

Tucson, AZ

- Will gather, aggregate, and clean retail electricity consumption and U.S. Census data to analyze energy affordability for Arizona utility customers throughout a variety of locations and socio-economic groups
- Will compare energy affordability for Arizona consumers with that of consumers in other states using federal energy survey data to understand how their situations compare
- Will conduct data-driven impact assessments of proposed rate increases to inform expert witness testimony for the defense, projecting damages based on consumer demographics and income

TEACHING

Sole Instructor of Record

ECON 418-518: Introduction to Econometrics

Fall 2024

Applied Econometrics; Applied Machine Learning; R

The University of Arizona

- Solely instructed 20+ students on econometrics and machine learning, receiving a mean evaluation grade of 94%
- Guided students in using R for data science, econometrics, and machine learning using real-world examples and data

Recitation Instructor

ECON 502B: Computational Methods and Dynamic Models in Economics

Spring 2025

Numerical Computing; Dynamic Models; Python

The University of Arizona

- Led weekly lab sessions instructing doctoral students on implementing numerical and dynamic methods in Python
- Held weekly office hours to assist students with course materials

Teaching Assistant

ECON 200: Basic Economic Issues

2022 – 2024

Microeconomics; Macroeconomics; Python

The University of Arizona

- Led teams of 10+ undergraduate and graduate students as the head teaching assistant in this 500+ student course
- Wrote Python code to automate uploading participation and exam score data, reducing time spent by 93%

SKILLS

Programming Languages

MATLAB; C++; R; Python; Julia; SQL (in order of usage)

Non-Programming Languages

English (Native); Croatian (Beginner)

Tools

Git/GitHub; Docker; Shell; Slurm; LaTeX; Microsoft Office

CONFERENCES, SEMINARS, AND WORKSHOPS

NBER Digital Economics and AI Meeting

Invitee

Spring 2025

Stanford University

NBER Digital Economics and AI Tutorial

Invitee

Spring 2025

Stanford University

Graduate School Symposium

Speaker

Spring 2022

University of Nevada – Las Vegas

FELLOWSHIPS, GRANTS, AND SCHOLARSHIPS

Ed Zajac Prize for Best Third-Year Paper

\$1,500.00

2025

The University of Arizona

Steve Manos Prize for Best Second-Year Paper

\$2,000.00

2024

The University of Arizona

Data Science Roots for Resilience Fellowship

\$7,000.00

2024

The University of Arizona

Joseph Smeeding Memorial Scholarship in Economics

\$1,540.00

2024

The University of Arizona

Joseph Smeeding Memorial Scholarship in Economics

\$1,490.00

2023

The University of Arizona

George W. Coleman Scholarship in Economics

\$2,000.00

2023

The University of Arizona

Graduate Access Fellowship

\$8,000.00

2022

The University of Arizona

Lee Business School Graduate College Scholarship

\$1,000.00

2021

University of Nevada – Las Vegas

Graduate Access Grant

\$1,000.00

2020

University of Nevada – Las Vegas

REFERENCES

Professor Matthijs Wildenbeest

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The University of Arizona

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