

Bryan S. Weber, PhD

Curriculum Vitae

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Education

- 2011–2015 **Ph D, Economics**, University of Wisconsin, Milwaukee, WI.
- 2009–2011 **MA, Economics**, UW-Milwaukee, Milwaukee, WI.
- 2005–2009 **BA, Economics, Honors, Cum Laude**, UW-Milwaukee, Milwaukee, WI.
- 2005–2009 **BA, Philosophy, Honors, Cum Laude**, UW-Milwaukee, Milwaukee, WI.

Academic Honors

- 2022 **Fellowship**, STEM Pedagogy Institute, College of Staten Island – City University of New York (CSI-CUNY).
- 2010 **Fellowship**, Summer School in International Economics, Justus-Liebig University.
- 2009 **Best New Tutor**, Tutoring and Academic Resource Center, UW-Milwaukee.
- 2005–2009 **Magnatek Scholarship for Academic Merit**, Magnatek, UW-Milwaukee.

Experience

Academic

- 2016–Present **Assistant Professor**, CSI-CUNY, Department of Economics.
- 2015–2016 **Visiting Assistant Professor**, College of William & Mary, Department of Economics.
- 2012–2015 **Instructor**, UW-Milwaukee, Department of Economics.
- 2011–2012 **Teaching Assistant**, UW-Milwaukee, Department of Economics.

Non-Academic

- 2021 **Consultant**, ranging from legal cost estimation to game industry matchmaking.
- 2015–2018 **Supporting Researcher**, National Consortium for the Study of Terrorism and Responses to Terrorism (START), Maryland.
- 2013–2014 **Research Assistant**, Institute for Survey & Policy Research, Milwaukee.

Peer-Reviewed Publications

Published

- 2022 **Weber, Bryan S.** and Paolo Cappellari. Troubled waters: Ferry transit and urban crime. *Urban Affairs Review*, 2022. (Forthcoming).

Used causal random forests along with spatial modeling techniques to evaluate the impact of ferry introduction. R, ggPlot, QGIS, SQL, HPC.

Paolo Cappellari and **Weber, Bryan S.** An analysis of the New York City traffic volume, vehicle collisions, and safety under COVID-19. *Journal of Safety Research*, 83, August 2022. (Forthcoming).

Implemented causal inference statistical techniques to estimate the association between traffic volume, collisions, and the cost of congestion. R, ggPlot, Stata, QGIS, SQL, HPC.

Weber, Bryan S. and Toan Luu Duc Huynh. COVID-19 challenges and firm responses: Analysis of a city-wide census in a developing country. *Managerial and Decision Economics*, 43(6):2184–2195, January 2022.

Used Vietnamese census data to examine firm responses to COVID-19 while mathematically modeling firm tendency to over-report damages. R, ggPlot, Stata.

2021 Anders H. Christiansen, Emil Gensby, and **Weber, Bryan S.** Deployment of causal effect estimation in live games of Dota 2. *Institute of Electrical and Electronics Engineers (IEEE) Transactions on Games (TOG)*, December 2021.

Built an in-game application and experimented with live users to determine they preferred a particular type of unbiased forecast. Identified that standard data science industry techniques are heavily biased. R, ggPlot.

Lam Hoang Viet Le, Toan Luu Duc Huynh, **Weber, Bryan S.**, and Bao Khac Quoc Nguyen. Different firm responses to the COVID-19 pandemic shocks: machine-learning evidence on the Vietnamese labor market. *International Journal of Emerging Markets*, July 2021.

Studied Vietnamese firms during COVID-19 using random forest, XGBoost, and other machine learning methods. Python, NumPy, Pandas.

2020 Hamid Mohtadi and **Weber, Bryan S.** Catastrophe and rational policy: Case of national security. *Economic Inquiry*, 59:140–161, June 2020.

Mathematically modeled low-probability, high-impact terrorist attacks using time-series cross-validation. Estimated the efficacy of government defense policies. R, ggPlot, Matlab.

2019 Kristin Mammen, Hyoung Suk Shim, and **Weber, Bryan S.** Vision Zero and traffic injury prevention in New York City. *Eastern Economic Journal*, 46:282–300, December 2019.

Examined the causal consequences of government policy for safety across the NYC area using difference-in-differences. Stata, QGIS.

Weber, Bryan S. Uber and urban crime. *Transportation Research Part A: Policy and Practice*, 130:496–506, December 2019.

Investigated the causal consequences of Uber entry for city safety using a merger of multiple nationwide data sets. R, ggPlot, SQL.

Hamid Mohtadi and **Weber, Bryan S.** Terrorism risk and optimal policy response: theory and empirics. *Indian Growth and Development Review*, 13(2):449–468, October 2019.

Examined low-probability, high-impact terrorist attacks and explored government response using mathematical modeling. R, ggPlot, Matlab.

Anders H. Christiansen, Emil Gensby, and **Weber, Bryan S.** Resolving simultaneity bias: Using features to estimate causal effects in competitive games. *Institute of Electrical and Electronics Engineers (IEEE) Conference on Games (COG)*, pages 1037–1044, August 2019.

Reviewed the causal consequences of player input on probability of winning competitive games using web-scraped data, control function approaches, and instrumental variables. R, ggPlot, Python, NumPy, Pandas.

John S. Heywood and **Weber, Bryan S.** University-provided transit and crime in an urban neighborhood. *The Annals of Regional Science*, 62:467–495, June 2019.

*Studied the interaction between bus and destination-to-destination ride programs in an urban campus. **Stata, ArcGIS.***

- 2018 **Weber, Bryan S.** Standard economic models in nonstandard settings–StarCraft: Brood War. In *IEEE Conference on Computational Intelligence and Games (CIG)*, pages 417–424. IEEE, August 2018.

*Programmed an AI to play a competitive game using economic modeling for more adaptive performance. **R, ggPlot, C++, Git.***

- 2014 **Weber, Bryan S.** Can safe ride programs reduce urban crime? *Regional Science and Urban Economics*, 48:1–11, September 2014.

*Explored the introduction of a safe-ride program into an urban university and estimated the cost savings in terms of crime prevention relative to police. **R, ggPlot, Stata, ArcGIS, HPC.***

In Progress

- 2022 Anders H. Christiansen, Emil Gensby, and **Weber, Bryan S.** Deep IV and causal effects in competitive games. Intended Journal & Submission Date: *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*, June 2023.

*Explored the efficiency gains from using causal deep learning techniques relative to economic standard techniques in a popular domain. **Python, NumPy, Pandas, TensorFlow, Keras.***

Weber, Bryan S., Toan Luu Duc Huynh, and Phillipp Chapkovski. Savings and investment preparation under Black Swan events. Intended Journal & Submission Date: *Journal of Economic Behavior and Organization*, June 2023.

*Experimentally examined the responses of individuals purchasing of lottery tickets and insurance under low-probability high-impact scenarios. **Stata.***

Toan Luu Duc Huynh, Tam Nguyen Luong, and **Weber, Bryan S.** Time inconsistent preferences and the New Years effect. Intended Journal & Submission Date: *Economic Letters*, October 2022.

*Performed a controlled experiment to determine whether individuals alter preferences at New Year, in order to document the alleged “New Years Effect”. **Stata.***

Adam Amos-Binks and **Weber, Bryan S.** Risk management: Reacting, anticipating and the relationship to winning in StarCraft. Intended Journal & Submission Date: *IEEE: Transactions on Games*, December 2022.

*Used causal machine learning to evaluate the black-box of AI responses, determining the extent to which they respond to risk. **Python, NumPy, Pandas, HPC, C++.***

Paolo Cappellari, Ali Moghtaderi, and **Weber, Bryan S.** Unintended effects of tax hikes: from ridership to congestion. Intended Journal & Submission Date: *Transportation Research Part A: Policy and Practice*, December 2022.

*Examined impact of congestion taxes in NYC on rideshare services and the consequences for inter-service competition. **R, ggPlot, QGIS, Stata.***

- 2019 **Weber, Bryan S.** Sequential entry and spatial price discrimination. January 2019. (Last Submitted).

*Simulated firm entry into a well-known spatial competitive market using mathematical modeling and a genetic algorithm. **R, ggPlot, HPC, C++.***

Selected Grants Awarded or Participated In

Peer-Reviewed

- 2022 **Bryan S. Weber.** (Principal) “Savings And Investment Preparation Under Black Swan Events,” Research Foundation-CUNY, \$3,500.
Jonathan Peters and **Bryan S. Weber.** (Principal) “Utilizing Web-Scraped Spatial Hospitality Data for Research and Teaching: Examining Detailed AirBnB Data for Economic and Business Policy Issues,” Teaching Innovation Initiative, Lucille and Jay Chazanoff School of Business, \$4,500.
- 2020 **Bryan S. Weber.** (Principal), “STATA for Students,” Department of Economics, CSI - CUNY, \$3,145.
- 2017 – 2018 **Bryan S. Weber.** (Principal, one of 6), “Proposal for Implementing OER at the College of Staten Island – CUNY,” Sponsored by CUNY: Office of Academic Affairs, CSI - CUNY, \$126,325.
- 2015 – 2018 **Bryan S. Weber.** (Non-PI, Supporting Personnel), “ARI-MA: Dissuading Adversaries and their RN Pathways: Integrating Deterrence Theory and Analytics in the GNDA,” Sponsored by National Science Foundation and Department of Homeland Security (DHS), \$351,839.
- 2018 **Bryan S. Weber.** (Non-PI, Supporting Personnel), “Deterrence, International Criminal History, Soft Targets and Horizon Scanning for Threats to Aviation,” Sponsored by Transport Security Administration. \$376,981.
Bryan S. Weber. (Principal), “CSI Provost Travel Grant,” Sponsored by Provost’s Office, CSI - CUNY, \$500.
- 2016 **Bryan S. Weber.** (Principal), “OER Pilot Project,” Sponsored by College of William & Mary, \$2,000.

Selected Presentations

Academic

- 2023 **Weber, Bryan S.,** Paolo Cappellari, and Ali Moghtaderi. Unintended effects of tax hikes: from ridership to congestion. American Economics Association: Transportation and Public Utilities Group, January 2023. New Orleans, LA. (Accepted).
- 2022 **Weber, Bryan S.,** Paolo Cappellari, and Ali Moghtaderi. Unintended effects of tax hikes: from ridership to congestion. Southern Economics Conference, November 2022. Fort Lauderdale, FL. (Accepted).
Weber, Bryan S., Paolo Cappellari, and Ali Moghtaderi. Unintended effects of tax hikes: from ridership to congestion. 4th Asia Conference on Business and Economics Studies, August 2022. Ho Chi Minh City, Vietnam. (Remote).
- 2021 **Weber, Bryan S.** Heavy tails and analytic challenges. North Carolina State University – Laboratory for Analytic Sciences: Wednesday Research Meetings, August 2021.
Presented practical statistical challenges for analysts when examining low-probability, high-impact events to an interdisciplinary audience.
Weber, Bryan S. and Sourav Batabyal. House prices and global health crisis. Western Economics Association International, June 2021. Remote.

- 2019 **Weber, Bryan S.** Columbus safe rides convening. December 2019. Columbus, OH.
Invited to discuss and analyze a recently implemented experimental safe ride program with interdisciplinary teams, the first experimentally implemented program of its kind, sponsored by AB InBev.
- Weber, Bryan S.**, K. Mammen, and H. S. Shim. Vision Zero and traffic injury prevention in New York City. Eastern Economics Association: Urban Economics, February 2019. New York, NY.
- Weber, Bryan S.**, A. Mohamed, and J. J. Jackson. Learning to program with CUNYBot. CUNY Games Conference, January 2019. New York, NY.
- Weber, Bryan S.**, K. Mammen, and H. S. Shim. Vision Zero and traffic injury prevention in New York City. American Economics Association: Transportation and Public Utilities Group (TPUG), January 2019. Atlanta, GA.
- 2018 **Weber, Bryan S.** Standard economic models in nonstandard settings–StarCraft: Brood War. IEEE:CIG Poster Session, August 2018. Maastrich, Netherlands.
- Weber, Bryan S.** Uber and urban crime. Rutgers Economics Department Seminar, March 2018. Rutgers - Newark, Newark, NJ.
- Weber, Bryan S.** Sequential entry and spatial price discrimination. CSI School of Business Seminar, February 2018. Staten Island, NY.
- Weber, Bryan S.** Uber and urban crime. American Economics Association: Transportation and Public Utilities Group, January 2018. Philadelphia, PA.
- 2017 **Weber, Bryan S.** Uber and urban crime. Eastern Economics Association: Transportation: Costs, Pricing, and Innovations Session, March 2017. New York, NY.
- Weber, Bryan S.** Using machine learning to assess the costs of terrorist attacks. National Consortium for the Study of Terrorism and Responses to Terrorism (START), January 2017. College Park, MD.
- 2016 **Weber, Bryan S.** Uber and urban crime. CSI Lucille and Jay Chazanoff School of Business Seminar, October 2016. Staten Island, NY.
- 2015 **Weber, Bryan S.** Modeling adversary decisions and strategic response. Academic Research Initiative: DHS, Domestic Nuclear Detection Office, July 2015. Leesburg, VA.
Presented work on low-probability, high-impact events to government and military stakeholders.
- 2014 **Weber, Bryan S.** Can safe ride programs reduce urban crime? Annual Potsdam Conference in Empirical Economics, March 2014. University of Potsdam, Germany.
- 2013 **Weber, Bryan S.** Can safe ride programs reduce urban crime? UW-Milwaukee Labor Economics Seminar, October 2013. Milwaukee, WI.
- Outreach**
- 2019 **Weber, Bryan S.** CUNYBot for education and entertainment. Bronx High School of Science Seminar, May 2019.

Weber, Bryan S. CUNYBot and gaming in economics. National Science Foundation – New York City Louis Stokes Alliance for Minority Participation, April 2019. Staten Island, NY.

Editing & Reviewing

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| 2022–Present | Associate Editor | <i>Evaluation Review</i> |
| 2021–Present | Associate Editor | <i>Journal of Asian Business and Economic Studies</i> |
| 2018–Present | Reviewer | <i>Journal Of Economic Behavior & Organization</i> |
| 2022 | Reviewer, Grants | <i>PSC-CUNY Research Award Program</i> |
| | Reviewer | <i>Evaluation Review</i> |
| 2020 | Reviewer | <i>Journal of Urban Economics</i> |
| | Reviewer | <i>IEEE Transactions on Games</i> |
| 2014 | Reviewer | <i>Regional Science and Urban Economics</i> |

Courses Taught

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| 2016–Present | CSI-CUNY | <i>Urban Economics (2x), Introductory Econometrics (11x), Behavioral Economics (3x), Economic & Managerial Statistics (2x), Introductory Microeconomics (5x), Introductory Macroeconomics (1x), Graduate Seminar in Big Data: Current Topics (1x), Economics Independent Study (2x)</i> |
| 2019 | Graduate Center-CUNY | <i>Capstone Independent Study (In Computer Science, 2x).</i> |
| 2015–2016 | William & Mary | <i>Econometrics (1x), Industrial Organization (1x), Introductory Microeconomics (2x).</i> |
| 2012–2015 | UW-Milwaukee | <i>Introductory Microeconomics (Independently 1x, As TA 2x), Introductory Macroeconomics (As TA 1x).</i> |

New Courses & Curricula Developed

- 2020 Urban Economics. Revised and taught course for the first time in 20 years.
- 2018 Introduction to Economic and Managerial Statistics with Open Educational Resources (OER). Zero Cost.
Introductory Macroeconomics with OER. Zero Cost.
Introductory Microeconomics with OER. Zero Cost.
- 2016 Introductory Microeconomics at The College of William and Mary with OER.

Student Mentoring

- 2019-2020 Kiwook Kwon, Independent Study, Masters Student (with Dr. Feng Gu). “Using Machine Learning and the Cobb-Douglass Model in CUNYBot.”
- 2018 John J. Jackson, Independent Study. “Modifications on CUNYBot: DolphinBot.”
Ali Mohamed, Independent Study. “Modifications on CUNYBot: DolphinBot.”
Jaclyn LaLima, Undergraduate Honors Thesis. “The Effects of Raising the Minimum Wage.”
Maaz Syed, Tatiana Anderson, Undergraduate Honors Thesis. “Predictive Policing.”
Ali Mohamed, Supervised Research. “Modifications on CUNYBot.”
- 2017 Jasmine Boone, Undergraduate Honors Thesis. “Evaluating Racial Biases in Policing and Crime Clearance.”

Service

CSI

- 2022–Present Data Analytics Working Group (DAWG).
- 2020–2021 Esports Working Group.
- 2018 Master of Ceremonies, Commencement for the Lucille and Jay Chazanoff School of Business.

Department/Program

- 2019–Present Committee Member, Academic Technology Committee.
- 2017–2021 Committee Member, Course and Standing Committee.
- 2018 Special Institutional Assignment, Annual Assessment Economics for the BA/BS Concentration.

Professional

- 2017–Present Member, Urban Economics Association.
- 2015–Present Member, Transportation and Public Utilities Group.
- 2014–Present Member, American Economics Association.
- 2019–2020 Member, Southern Economics Association.
- 2017 Committee Chair, Transportation and Public Utilities Group.

Public

- 2015–Present Member, Economics Stack Exchange. 157k people reached, top 50 users.

Programming

Software

- 2017–2021 CUNYBot
 - Developed a competitive AI to play a complete real-time strategy game using macroeconomic models. Uses machine learning techniques such as genetic algorithms, random forests, and Monte Carlo simulations. Opponents include AI designed by Facebook. Approximate win rate of 47%, code available on Github. C++*

CUNYBot Tournaments and Educational Usage

- 2020 Used in Notre Dame's Computer Science and Engineering 40971 as an example bot.
- 2018–2019 Institute of Electrical and Electronics Engineers (IEEE): Conference on Computational Intelligence and Games (CIG), placed 18th out of 27th.
- 2017–2019 Student Starcraft AI Tournament (SSCAIT)
- 2018 Artificial Intelligence and Interactive Digital Entertainment (AIIDE)