Kevin Zou

3053 Pamplin Hall
880 West Campus Drive
Blacksburg, VA 24061

zou@vt.edu
(785) 317-1126
https://kevinkcv.github.io/kevinzou/

Education

Virginia Tech, Blacksburg, VA
Ph.D. in Economics — *Expected May 2022*
Master of Arts in Economics — *Dec. 2018*

University of California, Santa Barbara, Santa Barbara, CA
Master of Arts in Statistics — *Jun. 2017*

Kansas State University, Manhattan, KS
Bachelor of Arts in Economics (Magna Cum Laude) — *May 2015*
Statistics Minor — *Dec. 2014*

Industry and Research Related Working Experience

Doctoral Researcher

Virginia Tech Economics Laboratory, Virginia Tech — *Aug. 2017 - Present*

- Develop an algorithm to classify time preference into four categories and apply the method to research data over the last decade.
- Design and conduct two laboratory experiments to investigate causal relationships between group size, contest successful function, weight function, and momentum effect in contest theory.
- Write programs (Python and MATLAB) and analyze data for experimental economics.
- Simulated data for the neuroeconomics research *Focal Stimulation of the Temporoparietal Junction Improves Rationality in Prosocial Decision-making*.

Data Scientist Intern (Remote)

Industrial and Commercial Bank of China, Changchun, China — *Jun. 2021- Aug. 2021*

- Trained machine learning models to classify potential customers for new financial products.
- Developed models to determine the key drivers of an existing customer related to default.
- Validated models built by other data analytic teams.

Statistical Consultant (Remote)

The Lycra Company, Singapore — *Feb. 2021 - Apr. 2021*

- Worked with an engineering team to monitor the data collection in the quality control process.
- Investigated the effect of reducing sampling frequency on defect detection capability.
- Convinced the stakeholders to reduce the sampling waste by 50%, saving production costs around $70k annually.

Research Assistant

The Policy Destination Area, Virginia Tech — *May 2020 - Sep. 2020*

- Participated in developing COVID Impacts and Influences Database of Databases.

Research Associate

The Data Science Consulting Laboratory, University of California, Santa Barbara — *Sep 2015 - Jun. 2017*

- Helped develop a course in statistical machine learning with R.
- Provided statistical consulting services at the DataLab.
- Advised modeling methods to various research from the MCDB Department.

Academic and Teaching Related Working Experience

Instructor

Department of Economics, Virginia Tech
- Principles of Microeconomics (Econ 2005) *Spring 2022, Spring 2020*

Teaching Assistant

Department of Economics, Virginia Tech
- Behavioral Economic Theory (Econ 6014) *Fall 2021*
- The Theory of Games and Economic Behavior (Econ 4424) *Fall 2021*
- Analysis of Economic Data (Econ 3254) *Spring 2021*
- Economic History of Diversity and Inclusion (Econ 1214) *Spring 2021*
- Experimental Economics (Econ 4434) *Fall 2020*
- Neuroeconmics (Econ/Neur/Psyc 4454) *Fall 2019*
- Economics of Regulation (Econ 3004) *Fall 2019, Spring 2019, Fall 2018*
- Principles of Macroeconomics (Econ 2006) *Spring 2018, Fall 2017*
- Principles of Microeconomics (Econ 2005) *Spring 2018, Fall 2017*

Head Teaching Assistant

Department of Statistics and Applied Probability, University of California, Santa Barbara
- Statistical Machine Learning (Pstat 231) *Spring 2017*
- Regression Analysis (Pstat 126) *Fall 2016*
- Probability and Statistics III (Pstat 120C) *Summer 2016*

Teaching Assistant

Department of Statistics and Applied Probability, University of California, Santa Barbara
- Introduction to Statistical Machine Learning (Pstat 131) *Winter 2017*
- Statistics for Economics (Pstat 109) *Spring 2016*
- Probability and Statistics I (Pstat 120A) *Winter 2016*
- Introduction to Statistics (Pstat 5A) *Fall 2015*

Undergraduate Teaching Assistant

Department of Economics, Kansas State University
- Intermediate Microeconomics (Econ 520) *Spring 2015*
- Sports Economics (Econ 524) *Fall 2014*
- Principles of Macroeconomics (Econ 120) *Spring 2014*
- Principles of Microeconomics (Econ 110) *Fall 2013*

Skills

Computer Skills
R, Python, Stata, MATLAB, SAS, Minitab, SPSS, LaTeX, JavaScript, CSS, and HTML.

Statistics Skills
Econometrics, Data visualization, Experimental design, Sampling technique, Linear model, Generalized linear model, Nonlinear model, Multivariate analysis, Machine learning, Model validation, Nonparametric statistics, Bayesian inference, Time series analysis, Stochastic process, Deep Learning, Generalized method of moments

Languages
- Mandarin Chinese (Native speaker)
- English (Full professional proficiency)

Certifications

- R Programming Language Assessment (LinkedIn)
- Specific Human Subjects Protection Training Certificate (VT)
- Certificate of Teaching Effectiveness (VT)
- Certificate of Social and Behavioral Research (CITI Program)

Honors, Awards and Scholarships

- Behavioral Economics and Finance Research Cultivation Grant (SWUFE, China) *Spring 2022*
- Graduate Teaching Assistantship (VT) *2017 - 2021*
- Graduate Research Assistantship (VT) *Summer 2020, Summer 2019*
- Graduate Teaching Assistantship (UCSB) *2015 - 2017*
- Outstanding Graduating Senior of Department of Economics (K-State) *Spring 2015*
- LeVelle Wood Scholarship Fund (K-State) *2013-2015*
- Ross Alan Haymaker Family Economics Scholarship (K-State) *2014-2015*
- K-state Semester Honor (K-State) *2011-2015*
- Outstanding Junior Honors Award from the Honor Society of Agriculture (K-State) *Spring 2014*
- Anna Maude Smith Fund for Student in Home Economics (K-State) *Spring 2014*
- Margaret Haupt Swift Memorial Scholarship (K-State) *Fall 2013*
- Honor from College of Human Ecology (K-State) *2012 - 2013*
- ELP Outstanding Student Awards (K-State) *Fall 2011*

Research Interests

Econometrics, Behavioral Economics, Experimental Economics, Game Theory

Working Papers

1. Group Size Effect in Sequential Multi-Battle Contests: An Experiment Study, with Yichuan Cai
2. A General Beta-Delta Discounting Model
3. New Hampshire or Super Tuesday, Does the Weight Matter?, with Yichuan Cai and Dr. Dongwoo Lee
4. A Machine Learning Approach on the Profit of Insider Trading, with Zhenyu Zhang

Ph.D. Dissertation: Behavioral Time Preference Models and Experiments in Contest

Job Market Paper: ***Group Size Effect in Sequential Multi-Battle Contests: An Experiment Study***

This paper presents the result of a laboratory experiment that investigates the group size effect in the sequential multi-battle contest. We first generalized Konrad and Kovenock's (2009) result to multi-player ($n \geq 2$). Then we conducted an n-player ($n = 3$ or 6) multi-battle experiment to compare the all-pay auction and the Tullock lottery side by side. When the number of contestants is increased in a sequential multi-battle contest, we get the following result: First, in battle 1, the boundary distribution is distorted in the all-pay auction, but only the no entry rate is increased in the Tullock lottery. Second, when the players are not in the lead, the dropout rate is higher with more players in the game. Third, even though the total number of battles has not increased significantly due to the increased number of players, more players adopt the dormant-reenter strategy. Finally, when the number of contestants increases, so does the winner effort, the maximum battle effort, and the total contest effort. In general, the theory in the Tullock lottery provides a more accurate prediction than in the all-pay auction.

Dissertation Committee

Dr. Sheryl Ball
Professor (Advisor)
Department of Economics
Virginia Tech
Phone: (540) 231-4349
Email: sball@vt.edu

Dr. Alec Smith
Assistant Professor (Co-advisor)
Department of Economics
Virginia Tech
Phone: (540) 231-7353
Email: alecsmith@vt.edu

Dr. Walid Saad
Professor
Bradley Department of Electrical and Computer Engineering
Virginia Tech
Phone: (571) 858-3160
Email: walids@vt.edu

Dr. Klaus Moeltner
Professor
Department of Agricultural and Applied Economics
Virginia Tech
Phone: (540) 231-8249
Email: moeltner@vt.edu

Dr. Matthew Kovach
Assistant Professor
Department of Economics
Virginia Tech
Phone: (540) 231-5764
Email: mkovach@vt.edu