Daniel Christian Posmik

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EDUCATION

University of Chicago, The Graham School — Chicago, IL, USA
Graduate Student at Large (Advanced Coursework in Statistics and Mathematics) — GPA: 3.7/4.0 — Exp. May 2024

University of Cincinnati, Lindner College & Blue Ash College — Cincinnati, OH, USA
Economics (BBA), Business Analytics (BSc), Mathematics (Minor) — GPA: 3.96/4.0 — May 2022
Business Administration (Associate of Arts) — GPA: 3.8/4.0 — May 2020

Relevant Coursework

- <u>Graduate-level</u>: Multiple Testing, Modern Inference, and Replicability · Statistical Theory and Methods I (accelerated) · Statistics and Machine Learning · Intro to Probability Models [†]
- <u>Core</u>: Analysis in R^n I · Calculus I, II, III · Linear Algebra · Statistics and Probability I · Mathematical Modeling · Dynamical Systems · Econometrics · Decision Models · Forecasting · Data Mining

Winter '24 [†] Coursework at the University of Chicago (Syllabus linked for Graduate Coursework)

AWARDS

- <u>McCall MacBain Scholarship ('23) [Ongoing]</u>: Finalist, 85 out of 1,000+ applicants advance to final round.
- <u>Presidential Leadership Medal of Excellence ('22)</u>: Highest university-wide leadership award, 4 yearly recipients.
- <u>Non-Traditional Student of the Year ('22)</u>: Collegiate honors, 1 yearly award to a first-generation student.
- <u>Schwarzman Scholarship ('21)</u>: Finalist, 400 out of 3,000+ applicants advance to the final round.
- <u>Annie Fitzgerald Award ('21)</u>: Highest university-wide community service award, 2 yearly recipients.
- <u>Heart of William Keating Leadership Award ('21)</u>: City-wide leadership award in Cincinnati, 1 yearly recipient.

ACADEMIC RESEARCH EXPERIENCE

University of Chicago – Department of Comparative Human Development — Chicago, IL, USA
Graduate Research Assistant · Prof. Guanglei Hong — Jan. 2024 - Present

- Developing robust estimators for cumulative and multi-stage treatment scenarios via causal decomposition analysis.
- Exploring causal identification of joint and synergistic effects in the presence of time-varying confounding
- Evaluating optimal and dynamic treatment regimes in STEM education for marginalized high school students across the U.S.

University of Chicago – Becker Friedman Institute for Economic Research — Chicago, IL, USA
Project Associate · Energy & Environment Lab (Prof. Michael Greenstone) — Jan. 2023 - Aug. 2023

- Coordinated a randomized control trial on the effect of agricultural machinery on illegal burning of crop residue in Pakistan
- Applied PCA to high-dimensional remote sensing data to construct a burn index for treatment effect regressions
- Analyzed network confounding across farmers, testing a spatial first differences approach (presented work at BFI Journal Club)
- Developed a random forest algorithm to predict environmental violations and tested its performance against regulators in the field
- Developed and maintained an R Package for internal lab use (contained various useful causal data analysis functions)
- Conducted literature review on machine learning performance metrics for ranked data, contributing to a methodological paper
- Automated data pipelines to download, clean, and merge large environmental datasets for the lab's machine learning portfolio
- Supported fundraising, reporting, and grant-writing efforts, specifically for NSF, J-PAL, and EPA grants

Kautz-Uible Economics Institute — Cincinnati, OH, USA
Capstone Research · Advised by Prof. Michael Jones — Jan. 2021 - Dec. 2021

- Studied causal identification under treatment effect heterogeneity, analyzing the effect of aid on international student enrollment
- Applied longitudinal data analysis techniques, e.g., fixed and random effects, to measure associations in the data
- Evaluated difference-in-difference designs for continuous, staggered, and time-varying treatment (i.e. Callaway & Sant'Anna, '21)
- Presented peer-reviewed publication at the Cleveland Federal Reserve and at the university-wide capstone competition

INDUSTRY EXPERIENCE

The Brattle Group — Boston, MA, USA
Research Analyst · Electricity Practice Group — July 2022 - Dec. 2022
- Analyzed energy congestion patterns on space- and time-indexed price data to inform a utility's $10m transmission investment
- Developed a cost-benefit model for the electrification of school bus fleets in light of grants from the Inflation Reduction Act

Novomer, Inc. — Rochester, NY, USA
Project Lead · Reported to Jeff Uhrig, CEO — May 2020 - Aug. 2020
- Led a research effort to assess the end-of-life efficiency of Novomer's biodegradable P(3HP) polymer
- Authored a qualitative white paper–published by *Waste360*–summarizing life cycle analysis and global waste impact

COMMUNITY SERVICE

University of Chicago Data Science Institute — Chicago, IL, USA
Community Data Fellow · Community-Centered Data Science Initiative — Sep. 2023 - Dec. 2023
- Led quarter-long data visualization project for the State of Illinois' Committee on Equity and Inclusion
- Created an interactive dashboard, visualizing and summarizing spatio-temporal data from the *Business Enterprise Program*
- Shared user-friendly dashboard for internal and external use, maintaining regular communication with the client and leadership

Neo Initiative — Cincinnati, OH, USA
Founder and President · Faculty Advisor Dr. Prince Ellis — June 2020 - Jan. 2022
- Created the first student-led pro-bono data analytics accelerator for minority-owned small businesses in the U.S.
- Coordinated a team of 6 executive officers, 5 project leads, 5 mentors, and 30 analysts on up to five semesterly projects
- Served a total of 15 black-owned small businesses, developing three practice areas (business intelligence, business analytics, systems implementation) while overseeing 2,480 community service hours each academic year
- Hosted and created a virtual state-sponsored data literacy series, reaching 300+ minority-identifying small businesses
- Created a digital and data systems academy in partnership with MORTAR Cincinnati (featured in *WCPO Channel 9* interview)
- Fostered partnerships with local data science companies, starting a mentorship program (featured in *The Business Journals*)
- Built partnership with the Ohio Department of Development, tapping funding ($7,500) through *Ohio Third Frontier* grant

UC Blue Ash Sustainability — Blue Ash, OH, USA
Co-Founder and Co-President · Faculty Advisor Dr. Mike Roman — Aug. 2019 - July 2020
- Lobbied for the *Energy Innovation and Carbon Dividend Act* (H.R. 763) during the CCL International Climate Conference
- Pitched the economic benefits of H.R. 763 to congresswoman Joyce Beatty (D-OH) who cosponsored the bill in 2020
- Hosted the UC Blue Ash Sustainability Summit which was attended by city of Cincinnati's director of sustainability

PRESENTATIONS & TALKS

Scholarly Presentations
- Becker Friedman Institute for Economic Research, University of Chicago (Journal Club) — Chicago, IL, USA
  Title: *Spatial First Differences: Accounting for Unobserved Heterogeneity in Cross Section* — 2023
- Federal Reserve Bank, Economic Scholars Conference — Cleveland, OH, USA
  Title: *Predicting Enrollment with Aid: A Fixed and Random Effects Approach* — 2022
- University of Cincinnati Undergraduate Scholarly Showcase (Capstone Competition) — Cincinnati, OH, USA
  Title: *Predicting Enrollment with Aid: A Fixed and Random Effects Approach* — 2021

Talks
- TEDx Speaker, *TEDx UCincinnati* ("Telling Stories with Data") — 2021
- Convocation Speaker, *University of Cincinnati* — 2020

PROFESSIONAL SERVICE & VOLUNTEERING

Professional Service
- Referee, *Journal of Student Financial Aid* — 2022
- Referee, *Economic Scholars Conference Cleveland Federal Reserve* — 2022

Volunteering
- Service Dog Trainer, *4Paws for Ability* — 2022
- Volunteering Secretary, *University of Cincinnati Mountaineering Club* — 2021
- German Teacher, *Tri-State German American School* — 2019

SKILLS & INTERESTS

- **Programming**: R · Python · SQL · QGIS · Git · Linux · Lua
- **Languages**: English (Fluent) · German (Native) · French (Advanced) · Latin (Intermediate) · Spanish (Basic)
- **Interests**: Backpacking · Rock/Ice Climbing · Kayaking · Long-distance Cycling · Vipassana Meditation