

Patrick Bernhard

📍 Davis, CA, US ✉️ pbernhard@ucdavis.edu 🌐 in/bernhard-patrick

SUMMARY

Experienced and accomplished academic currently pursuing a doctorate at the University of California, Davis. Passionate in bridging gaps between political science and advanced data science techniques. Life-long learner following a chronic curiosity.

EDUCATION

Ph.D., Political Science | University of California | Designated Emphasis: Computational Social Science | US, California, Davis | 2026

B.S., International Relations and Politics | Carnegie Mellon University | Minor: International Conflict and Cybersecurity | US, Pennsylvania, Pittsburgh | 2020

EXPERIENCE

Graduate Student Researcher | Dr. Brandon Kinne | University of California, Davis | January 2023 - Present

- Managed the collection and refinement of data from diverse sources for the creation of a comprehensive dataset. This dataset, slated for future release, encompasses bilateral security agreements between 180 countries spanning the period from 1980 to 2022.

Teaching Assistant | University of California, Davis | US, California, Davis | January 2023 - Present

- Assisted instructors with managing content of the Canvas class site for classes of 170 students, including creating and grading assignments, quizzes, and pages and assisting students in resolving issues with Canvas.
- Classes: The Politics of Interdependence - TA Spring 2023; Fall 2022, International Law - TA Winter 2023; Winter 2022, Comparative Political Development: Democracy - TA Spring 2022.

International Finance Intern | International Finance Division, Carnegie Mellon | Pennsylvania, Pittsburgh | May 2019 - December 2020

- Developed and maintained complex Excel spreadsheets to document international shipments between various Carnegie Mellon locations.
- Communicated with and assisted internationally-based clients with pricing and shipment issues via email and telephone.

National Security and Intelligence Analysis Intern | Institute for the Study of War | Washington DC | January 2019 - December 2019

- Collected open-source intelligence on various international areas of responsibility through the utilization of search engines, databases, and social media sites.
- Utilized open source intelligence (OSINT) to conduct research on critical national security issues concerning Iraq and Syria.
- Conducted data analysis, developed statistical models, and produced graphics and maps for an internal publication on ISIS movement trends and attacks within Nangarhar Province, Afghanistan.

PROJECTS

Transnational Security Cooperation Data Project | University of California, Davis - Political Science Department | September 2022 - Present

- Explored SCAs that established bilateral cooperative relationships on nontraditional security threats, including terrorism, trafficking, organized crime, non-state armed groups, and similar transnational threats.
- Managed and organized over 2500 security agreements over 40 years, ensuring that each bilateral agreement inhabited a row in the spreadsheet, and multiple news sources referring to the same agreement were accurately recorded in the appropriate row.
- Applied various Natural Language Processing techniques such as topic modeling to the corpus of agreement texts to extract and analyze how key security concepts fluctuated over time.

An Exploratory Risk-Utility Meta-Analysis of Recommender Algorithm Audits | University of California, Davis - Interdisciplinary | December 2022 - May 2023

- Analyzed 146 algorithmic audits from 32 studies that report fitting risk-utility statistics from YouTube, Google Search, Twitter, Facebook, TikTok, Amazon, and others.
- Completed a meta-analysis of recommender algorithm audits that showed, on average, the audits found no harm 90% of the time.
- Journal article accepted for publication in the International Journal of Information Management (Impact factor: 19)

INVOLVEMENT

DataLab - University of California, Davis | University of California, Davis | DataLab Affiliate | January 2022 - Present

Graduate Association of Political Science Students | University of California, Davis | Social Coordinator | September 2022 - June 2023

PUBLICATIONS

"Lewis, D. E., Bernhard, P., You, E. (2018). President Trump as manager: Reflections on the first year. *Presidential Studies Quarterly*, 48(3), 480-501."

"Hilbert, M., Thakur, A., Flores, P. M., Zhang, X., Bhan, J. Y., Bernhard, P., Ji, F. (in press). 8% - 10% of algorithmic recommendations are 'bad', but... an exploratory risk-utility meta-analysis and its regulatory implications. *International Journal of Information Management*.

SKILLS

Technical Skills: R (NLP, MLE, regression, data visualization), Python (Machine Learning, NLP, topic modeling), Stata, LATEX typesetting software, Microsoft 365 & Google Workspace, Computer hardware (machine building, troubleshooting)