

Patrick Y. Wu

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Academic Position

New York University's Center for Social Media and Politics

Postdoctoral Fellow

New York, NY

2021 -

Education

University of Michigan

Ph.D. in Political Science and Scientific Computing

Ann Arbor, MI

2015 - 2021

- Fields: Political Methodology (with honors) and American Politics
- Committee: Walter Mebane (chair), Emily Mower Provost, Kevin Quinn, Stuart Soroka
- Dissertation: *Essays on Representation Learning for Political Science Research*

University of Michigan

M.A. in Statistics

Ann Arbor, MI

2016 - 2021

University of Chicago

B.A. in Political Science (with honors) and Statistics

Chicago, IL

2010 - 2014

Publications

Nicole Wu* and [Patrick Y. Wu](#)*. 2024. "Surveying the Impact of Generative Artificial Intelligence on Political Science Education." Forthcoming in *PS: Political Science & Politics*. (* denotes equal contribution)

[Patrick Y. Wu](#), Richard Bonneau, Joshua A. Tucker, and Jonathan Nagler. 2022. "Dictionary-Assisted Supervised Contrastive Learning." *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP)*. [Paper]

[Patrick Y. Wu](#) and Walter R. Mebane, Jr. 2022. "MARMOT: A Deep Learning Framework for Constructing Multimodal Representations for Vision-and-Language Tasks." *Computational Communication Research* 4(1): 275-332. [Paper]

In Submission

[Patrick Y. Wu](#), Jonathan Nagler, Joshua A. Tucker, and Solomon Messing. 2024. "Concept-Guided Chain-of-Thought Prompting for Pairwise Comparison Scoring of Texts with Large Language Models." Submitted to the *Conference on Language Modeling (COLM)*. [Job Market Paper 2]

[Patrick Y. Wu](#), Jonathan Nagler, Joshua A. Tucker, and Solomon Messing. 2023. "Large Language Models Can Be Used to Estimate the Latent Positions of Politicians." [Job Market Paper 1]

In Preparation

Haohan Chen, Zhanna Terechshenko, [Patrick Y. Wu](#), Richard Bonneau, Jonathan Nagler, and Joshua A. Tucker. 2022. "Detecting Political Sectarianism on Social Media: A Deep Learning Classifier with Application to 2020-2022 Tweets."

Walter R. Mebane, Jr., Diogo Ferrari, Kevin McAlister, and [Patrick Y. Wu](#). 2022. "Measuring Election Frauds." [Working Paper]

[Patrick Y. Wu](#), Walter R. Mebane, Jr., Logan Woods, Joseph Klaver, and Preston Due. 2019. "Party Words: Partisan Associations from Word Embeddings of Twitter Users' Bios." [Working Paper]

Walter R. Mebane, Jr., [Patrick Y. Wu](#), Logan Woods, Joseph Klaver, Alejandro Pineda, and Blake Miller. 2018. “Diverse Election Experiences Reported Without Bias: Observing Election Incidents in the United States via Twitter.” [[Working Paper](#)]

Diogo Ferrari, Robert Franzese, Hayden Jackson, ByungKoo Kim, Wooseok Kim, and [Patrick Y. Wu](#). 2020. “The Role of Economic Decline and Malaise in the Rise of Extreme Nationalist Populism.” [[Working Paper](#)]

Software

DASCL: Python package that implements the dictionary-assisted supervised contrastive learning framework (with Richard Bonneau, Joshua A. Tucker, and Jonathan Nagler) [[GitHub Repository](#)]

eforensics: R package to estimate fraud in elections using finite mixture models (with Diogo Ferrari, Kevin McAlister, and Walter R. Mebane, Jr.) [[GitHub Repository](#)]

MARMOT: Python package to calculate joint image-text representations that may be missing a modality (with Walter R. Mebane, Jr.) [[GitHub Repository](#)]

PartisanAssociations: Python package to calculate partisan associations of Twitter users using their user bios (with Walter R. Mebane, Jr., Logan Woods, Joseph Klaver, and Preston Due) [[GitHub Repository](#)]

Invited Presentations

2024 Computational Social Science Seminar, Meta

2024 QTM Speaker Series, Department of Quantitative Theory and Methods at Emory University

2023 Workshop on Natural Language Processing, Summer Institute in Computational Social Science at New York University

2023 “Linking Online Activity to Offline Behavior,” IDeaS Workshop at Carnegie Mellon University

Media

“For Trump’s Backers in Congress, ‘Devil Terms’ Help Rally Voters.” *New York Times*. 2022. Assisted with text analysis in the article.

“This is how you file a legal election complaint.” *Monkey Cage*. 2016. Author.

Honors and Awards

2020 MICDE Fellowship, Michigan Institute for Computational Discovery and Engineering (\$4,000)

2019 Best Poster, UMTweetCon

2019 Best Paper, UMTweetCon

2018 Roy Pierce Scholars Fund, University of Michigan Institute for Social Research Center for Political Studies (\$6,000)

2017 Honorable Mention, NSF Graduate Research Fellowships Program

2014 Dean’s List, University of Chicago

Teaching Experience

Graduate-Level Classes (as Graduate Student Instructor / TA)

- 2020 Machine Learning: Applications in Social Science Research, ICPSR Summer Program in Quantitative Methods (with Christopher Hare)
- 2017, 2018, 2020 Statistical Methods in Political Research II, University of Michigan (with Rocio Titiunik, 2017 & 2018, and Kevin Quinn, 2020, as grader)
- 2016, 2017 Mathematics for Political Scientists, University of Michigan (with Iain Osgood)

Undergraduate-Level Classes (as Graduate Student Instructor / TA)

- 2021 Introduction to Computational Political Science, University of Michigan (with Yuki Shiraito, as grader)
- 2019 Comparative Analysis of Government Institutions, University of Michigan (with George Tsebelis, as grader)

Professional and Departmental Service

Manuscript Referee: *American Journal of Political Science*, *Political Analysis*, *Political Communication*, *Journal of Health Communication*, *Computational Communication Research*, *Workshop on Images in Online Political Communication* (PhoMemes), *ACL Student Research Workshop*

- 2019–2021 Coordinator, Interdisciplinary Seminar in Social Science Methodology, University of Michigan
- 2018–2019 Coordinator, Statistical Learning Workshop, University of Michigan

Conferences

American Political Science Association Annual Meeting: 2016, 2017, 2019, 2020, 2021, 2022, 2023

Annual Meeting of the Society for Political Methodology: 2017, 2018, 2020, 2021, 2022, 2023

Conference on New Directions in Analyzing Text as Data: 2018, 2021, 2022, 2023

Empirical Methods in Natural Language Processing: 2022

International Methods Colloquium: 2020

Michigan Student Symposium for Interdisciplinary Statistical Sciences: 2019, 2020

MIDAS Annual Symposium: 2020

Midwest Political Science Association Annual Meeting: 2016, 2017, 2018, 2019, 2021, 2022

NeurIPS: 2020 (non-paper competition track presentation)

Politics and Computational Social Sciences: 2020, 2023

TextXD: 2020

UMTweetCon: 2019

Other Experience

- 2020 Graduate Student Academic Term Intern, ProQuest Text and Data Mining
- 2017 Graduate Student Research Assistant, University of Chicago Crime Lab
- 2014–2015 Chief Research Assistant for Judge Richard A. Posner and Professor William Landes, University of Chicago Law School