Si Wu

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RESEARCH INTERESTS

American politics, race and class, political behavior, public opinion, media, immigration, data science

EDUCATION

- Boston University, Ph.D. in political science, Boston, MA.   Expected May 2025
- Northeastern University, M.A. in journalism, Boston, MA.   Jan. 2018 – May 2020
- Durham University, Postgraduate Certificate in Education, Durham, U.K.   Sept. 2016 – June 2017
- Imperial College London, BSc in physics, London, U.K.   Sept. 2013 – June 2016

PUBLICATIONS

Geometry of Graph Partitions via Optimal Transport (October 2020). *SIAM Journal on Scientific Computing*. (With Tara Abrishami, Nestor Guillen, Parker Rule, Zachary Schutzman, Justin Solomon, and Thomas Weighill.) ArXiv: 1910.09618.
- Key words: political districting plans; partitions; optimal transport; network flows.

Democrats 'went low' on Twitter leading up to 2018 (February 2019). *Roll Call*. (With Aleszu Bajak).
- Key words: Twitter data; sentiment analysis; machine learning; Senate candidates.

FELLOWSHIPS & AWARDS

Hariri Institute for Computing at Boston University, Graduate Student Fellow Award ($7,500)   2020
Boston University, Dean's Fellowship   2020-2021
MGGG Redistricting Lab, Summer Research Stipend ($5,000)   2019
Northeastern University, Graduate Student Scholarship ($12,897)   2018-2020

WORK EXPERIENCE

Research Assistant, Boston University   July 2020 – Aug. 2020
- Researched for Professors Maxwell Palmer and Dino Christenson.
- Collected Twitter data, scraped the web, and analyzed districting plans and financial donations.

Data Visualization Intern, Harvard Data Science Initiative   Sept. 2019 – Dec. 2019
- Developed data visualizations to effectively communicate data science concepts.
- Helped with conference planning and website design for the Harvard Data Science Review Inaugural Symposium.

Data Science Research Fellow, MIT/Tufts University   June 2019 – Aug. 2019
- Researched for the Metric Geometry and Gerrymandering Group (MGGG Redistricting Lab).
- Coauthored "Geometry of Graph Partitions via Optimal Transport" in *SIAM Journal on Scientific Computing*.
- Compiled figures with census data and GIS shapefiles by applying math techniques such as Markov Chain Monte Carlo, multi-objective optimization, transport distances and network.

- Developed JavaScript projects for data visualization and outreach.

Researcher, Northeastern's School of Journalism   April 2018 – May 2019
- Collected Twitter and Reddit data with Python and R.
- Applied machine learning techniques on tweets from midterm election candidates to predict positive/negative sentiment.
- Wrote articles on machine learning, data journalism, and augmented reality.

Teaching Assistant, Northeastern University   Sept. 2018 – Nov. 2018
- Taught students how to write obituaries and leads and nut graphs in news stories.
- Graded homework.
- Assisted students on Associated Press style of writing and grammar.

PRESENTATIONS

Northeastern University Visualization Consortium (NUVis)   Dec. 2018

SERVICE

Hariri Institute for Computing, Boston University   2020 – 2021
- "Did you know you could…?" series co-coordinator and host

MEDIA COVERAGE

Hariri Institute for Computing News, Boston University   April 2021
- "Graduate Student Fellow Hopes to Apply Data Journalism Skills to Study Inequalities"

College of Arts, Media and Design News, Northeastern University   Nov. 2019
- "Si Wu, Journalism Graduate Student, Uses Data to Help Others Understand Political Redistricting"

News@Northeastern, Northeastern University   March 2019
- "Democrats who won 2018 midterms were more negative than Republicans on Twitter, research finds"

SKILLS

- Languages: English (fluent), Mandarin and Cantonese (native).
- Computing Skills: Python, R, GIS, JavaScript, Machine Learning, HTML, CSS, and LaTeX.
- Software: GitHub, Microsoft Office, Final Cut Pro, Adobe Premier, WordPress, Tableau.