Yunus Emre Tapan

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Education

Northeastern University Boston, MA
Ph.D. Candidate, Political Science; minor in Computational Social Science. Ph.D. expected Summer 2027.

- Dissertation: *Three Essays on Attention Segregation in American Online Life.*
- Committee: Nick Beauchamp (chair), David Lazer, Risa Kitagawa, Beatrice Magistro.

Graduate Certificate, Computational Social Science, 2022.

Kadir Has University Istanbul, Turkey
Doctoral coursework in International Relations (full scholarship), 2019–2021.

Middle East Technical University (METU) Ankara, Turkey
M.Sc., Middle East Studies, 2019.

- Thesis: *Turkish Salafism on Twitter: A Social Network Analysis* (advisor: Tuba Ünlü Bilgiç, now at the University of St. Thomas, USA).

Boğaziçi University Istanbul, Turkey
B.A., Economics, 2016.

Research & Teaching Interests

- **Substantively:** how political attention, affect, and identity fragment — across individuals, national publics, and elite networks.
- **Methodologically:** computational social science and political methodology, including text-as-data, network analysis, and the evaluation and interpretability of language models as measurement instruments.
- **Teaching:** foundational programming, data analysis, and data visualization for students across disciplines; research methods and statistics; computational social science; AI, data ethics, and society.

Working Papers *(manuscripts available on request)*

- **What Drives Anti-Americanism Online? Evidence from Türkiye.** With T. Ünlü Bilgiç and Z. E. Koç. LLM-assisted multi-label classification of 95,933 Turkish tweets (2008–2021): anti-Americanism is overwhelmingly political (85%) rather than cultural (1%), with a substantial conspiratorial component (39%).
- **National Identity, Not Professional Knowledge, Structures Transnational Expert Networks.** Relational-event analysis of 650,000 interactions among 1,933 Turkish and American foreign-policy experts (2012–2021); national identity outweighs shared expertise in structuring the network, and three of its six communities are over 97% mono-national.
- **How Do Networks Respond to Shocks?**
  A state-space relational event model with impulse-response estimation, applied to a decade of U.S.–Turkey foreign-policy elite interactions and coded bilateral crises; crises briefly reorganize elite ties before the network settles back within about six weeks.

Works in Progress

- **Stance Is Not a Construct: A Construct-Validity Framework for Reporting LLM Annotation Performance.**
  Across 14 compact open-weight LLMs and four prompt conditions on 999 hand-coded Turkish tweets, models capture surface stance but over-apply layered theoretical categories — a construct-validity gap

formalized here as a reporting framework.

- **Anti-Westernism and Status-Seeking in World Leaders' Speeches.** With E. Balta.
  An LLM multi-label classification pipeline for speeches by Modi, Erdoğan, and Putin.
- **Framing Technology in Congressional Discourse, 1995–2025.** With B. Magistro, S. Borwein, B. Bonikowski, and R. M. Alvarez.
  A framing analysis of about one million speech turns in the U.S. Congressional Record, with correlational analysis of which legislators use which frames.

Publications

- **Tapan, Y. E.** (2019). *Turkish Salafism on Twitter: A Social Network Analysis.* M.Sc. thesis, Middle East Technical University (advisor: Tuba Ünlü Bilgiç).
- Çolak, M. O., İ. E. Aksu, and **Y. E. Tapan** (2016). "Anti-communist Propaganda: The Example of the Büyük Doğu Journal." Book chapter, Nobel Academic Publishing.

Data & Software

Published datasets (first author)

- *Geographical Infrastructure for the City of Boston, v.2023.* With D. Hatten, M. Zoorob, A. Ristea, S. Sheini, and D. T. O'Brien. Harvard Dataverse. doi:10.7910/DVN/KZEERJ.
- *2020 Census Geographies (Boston).* With D. T. O'Brien. Harvard Dataverse. doi:10.7910/DVN/M9F1XY.
- *COVID-19 Twitter Database — Turkish Sample.* With B. Özturan. Zenodo, 2020. doi:10.5281/zenodo.3908982.

Software & open materials

- *tech-speech-congress* — pipeline for extracting speech turns from U.S. congressional floor speeches.
- *LLMs for Social Scientists* — a hands-on book for social scientists, written in the open (in progress).

Invited Talks & Guest Lectures

- "Anthropology of Machines: From Black Box to White Box." Guest lecture, SICSS-Istanbul, July 2026.
- "LLM Classification Strategies for Political Text." NULab Critical Forum, Northeastern University, December 2025.
- "Using the Twitter API for Academic Research." Twitter, Boston, August 2022.

Conference Presentations

2026

- "Stance Is Not a Construct: LLM Validity Gaps in Annotation." MPSA; PolMeth (poster); APSA.
- "The Political Geometry of Ideology in LLMs." IC2S2 (poster).
- "How Do Networks Respond to Shocks?" NetSci (poster); PaCSS.
- "Who Talks to Whom among Transnational Epistemic Elites Online?" ISA; MPSA.

2025

- "Stance Is Not a Construct: LLM Validity Gaps in Annotation." PaCSS (poster).
- "How Does Anti-Americanism Evolve in Turkish Social Media over Time?" (with T. Ünlü Bilgiç and Z. E. Koç). ISA.

2024

- "Who Talks to Whom among Transnational Epistemic Elites Online?" PolNet (poster); PolMeth (poster).

2022

- "Twitter Opinion Barometer on Turkish–American Relations." (with B. Özturan, Ş. Kardaş, and M. Kutlu). PaCSS (paper); IC2S2 (poster).

2020

- "Turkish Salafism on Twitter: Social Network Analysis and Computational Text Analysis." IC2S2; PaCSS; PolNet (posters).

Teaching Experience

Instructor of Record, Northeastern University Spring 2027
Department of Political Science · upcoming

- *Research Methods* (POLS 2399), undergraduate. Student ratings expected May 2027.

AI Bootcamp Lead (Instructor), AIDE Summer Program May–Sep 2025
The Ethics Institute, Northeastern University · 15 philosophy graduate students

- Co-designed and led the programming labs of the AI + Data Ethics (AIDE) Summer Program, taking students from Python fundamentals to building with language models: data wrangling (NumPy, pandas) → supervised ML → algorithmic fairness (COMPAS, Fairlearn) and differential privacy → neural networks, transformers, and embeddings → LLMs (Hugging Face), prompt engineering, and retrieval-augmented generation.
- Mentored each student one-on-one, from their first line of Python to building with LLMs.

Visiting Lecturer, Kadir Has University 2020–2021
Istanbul · undergraduate

- *Civic Values*: taught the course independently.
- *Computational Thinking*: lab instructor for this Python-based course.

Teaching Assistant, Northeastern University 2022–2026
Department of Political Science — eight course sections

- Graduate: *Statistical Analysis* (INSH 6500; in R, online and asynchronous; 40 students), Summer 2026.
- Undergraduate methods: *Research Methods* (POLS 2399; two sections), Spring 2026; *Quantitative Techniques* (POLS 2400; 30 students), Summer 2025.
- Undergraduate substantive: *Globalization & International Affairs* (INTL 1101; two sections), 2022; *Government & Politics in the Middle East* (POLS 3465), Spring 2022; *Comparative Politics* (POLS 1155), Spring 2023.
- Guest lecture in *Research Methods*, "Research Design in Practice" (Spring 2026): one study traced from research question through measurement, sampling, and findings, with students making the design decisions in class.

Teaching Assistant (2019) and Co-organizer (2020–2023), SICSS-Istanbul 2019–2023
Two-week Summer Institute in Computational Social Science for early-career researchers; four editions (2019, 2020, 2021, 2023).

- Taught hands-on workshops in programming, digital data collection, and text analysis, and mentored participant teams through the institute's project-based second week — from research design to final presentations. Returned as guest lecturer in 2026.

Curriculum design

- **AIDE bootcamp** (2025): co-designed the Python-to-LLMs lab sequence above; syllabus and materials are open at github.com/kacreel/aide_summer.
- **SICSS-Istanbul** (2019–2023): co-founded the institute with M. Nelimarkka and A. Ünver, with support from the Russell Sage and Alfred P. Sloan Foundations, and helped build its curriculum in programming, data collection, machine learning, and text analysis for about twenty participants a year.
- **BLISS — Boston LLMs Initiative for Social Sciences** (2025): co-founded with B. Özturan and secured NULab funding; designed and led a four-session workshop series for about ten social scientists from several disciplines, from Python and data fundamentals through neural networks and transformers by

hand to LLMs with and without APIs and retrieval-augmented generation.

- **NULab Digital Integration Teaching Initiative (DITI)** (Summer 2022): Fellow, integrating digital and computational methods into the classroom.

Research Experience

Visiting Research Fellow, Alvarez Lab, California Institute of Technology (non-stipended) Fall 2026

- Tech in Congress project: *Framing Technology in Congressional Discourse, 1995–2025*.

Research Fellow, Aldrich Resilience Lab Jan–May 2026

- Studied the role of social capital in disaster recovery with a three-wave panel of Marshall Fire survivors, finding social capital is not uniformly protective. Separately analyzed a survey of disaster-and-crisis professionals on how the field conceptualizes "polycrisis."

Data Consultant, Boston Area Research Initiative (Northeastern & Harvard) May 2023–Feb 2025

- Helped the City of Boston, community organizers, and the Boston Children's Museum put the city's open data to use themselves; maintained reproducible data pipelines and interactive ArcGIS maps; mentored students from high school to master's level; first-authored two published civic datasets.

Research Fellow, NULab for Digital Humanities & CSS May–Aug 2022

- Built text-analysis tooling for the Digital Integration Teaching Initiative (DITI) and the Women Writers Project.

Researcher, Turkish Foreign Policy Barometer on Twitter (German Marshall Fund) 2020–2021

- Commissioned to build the online barometer tracking elite foreign-policy discourse on Twitter.
- Presented results; delivered reports and a public dashboard.

Research Assistant, Center for Middle Eastern Strategic Studies (ORSAM), Ankara 2016–2018

- Conducted social-network analyses of online extremist communities on a U.S. Department of Homeland Security–funded project.
- Presented results at a NATO COE-DAT workshop, Ankara.

Grants, Honors & Fellowships

- GEBİP Ph.D. Fellowship, Turkish Academy of Sciences (TÜBA) — $12,000 (2019–2021)
- ICPSR Scholarship for Political Science Research — $5,000 (2020)
- SICSS Fellowship, Russell Sage Foundation — $1,000 (2018)
- Northeastern Department of Political Science Travel Awards — $4,000 total (2022–2026)
- APSA Political Methodology (PolMeth) Travel Award — $1,000 (2024), $750 (2026)
- APSA Political Communication "Sparks" Award — $750 (2024)
- APSA Political Networks (PolNet) Travel Award (2026)
- NULab BLISS Grant — $500 (2025); NULab Travel Grant — $1,000 (2022)
- Stipended Graduate Assistantship, Northeastern (2021–present)
- 4th place, COVID-19 Datathon, TRIA AI (2020)

Service to the Profession and Community

- **Peer reviewer:** *International Studies Perspectives*; IC2S2.
- **Conference roles:** chair and discussant, MPSA (2026); chair, PaCSS (2022).
- **Community Lead, Twitter Developers Community** (Istanbul–Boston, 2021–2023).
- Rapporteur, 6th Istanbul Mediation Conference, Istanbul, October 2019.

Public Scholarship

- Data scientist (commissioned), **BBC News Türkçe**, December 2020: computational text analysis behind the newsroom's 2020 year-in-review — a full year of the newsroom's tweets distilled into six themes with animated visualizations.
- "Disaster survivors need help remaining connected with friends and families and access to mental health care" (with D. P. Aldrich), *The Conversation*, February 2023.
- **The Social Computist** — essays on computational social science and AI (yemretapan.substack.com).

Additional Training

- Oxford Spring School in Advanced Research Methods, University of Oxford, 2021: Machine Learning for Social Sciences.
- ICPSR Summer Program in Quantitative Methods of Social Research (Inter-university Consortium for Political and Social Research), 2020: Advanced Network Analysis; Computational Text Analysis. Full scholarship.
- Summer Institute in Computational Social Science (SICSS-Helsinki), 2018. Full scholarship.

Skills & Languages

Programming: Python, R, SQL, Bash, Git, LaTeX.

Data visualization & geospatial: ArcGIS; ggplot2 and matplotlib; interactive maps, dashboards, and animated graphics (BBC News Türkçe year-in-review; BARI maps).

Methods: NLP and computational text analysis; LLM evaluation and mechanistic interpretability (sparse autoencoders, logit lens, representation analysis); Bayesian statistics; longitudinal and multilevel modeling; relational event models; impulse responses and local projections; information-theoretic measurement; causal inference.

Languages: Turkish (native), English (fluent), Arabic (intermediate, working proficiency), French (elementary).

References

Nick Beauchamp — Associate Professor, Political Science & Network Science, Northeastern University
(dissertation chair) · n.beauchamp@northeastern.edu

Daniel T. O'Brien — Professor, Public Policy & Urban Affairs, Northeastern University
(supervisor, BARI data consultancy, 2023–2025) · d.obrien@northeastern.edu

Beatrice Magistro — Assistant Professor, AI Governance, Political Science & Public Policy and Urban Affairs, Northeastern University
(teaching and research supervisor, INSH 6500; coauthor) · b.magistro@northeastern.edu

David Lazer — University Distinguished Professor, Political Science & Computer Sciences, Northeastern University
(dissertation committee) · d.lazer@northeastern.edu

Risa Kitagawa — Associate Professor, Political Science & International Affairs, Northeastern University
(dissertation committee) · r.kitagawa@northeastern.edu