Benjamin J. **Radford**

POLITICAL SCIENTIST · DATA SCIENTIST

✉ benjamin.radford@uncc.edu | 🏠 benradford.github.io | ⌂ benradford

Professional Experience

Assistant Professor — *Charlotte, NC*
UNIVERSITY OF NORTH CAROLINA CHARLOTTE — *2019–Present*
Public Policy Ph.D. Program, Political Science and Public Administration, School of Data Science

President & Chief Scientist — *Alexandria, VA*
LEVELUP RESEARCH, LLC — *2018–Present*
DARPA *SafeDocs* & DARPA *Hybrid Fusion*

Principal Data Scientist — *Arlington, VA*
SOTERA DEFENSE SOLUTIONS / KEYW CORPORATION — *2017–2018*
DARPA cybersecurity attribution program

Senior Data Scientist — *Arlington, VA*
CAERUS ASSOCIATES / CYBRAICS — *2015–2016*
DARPA *Network Defense*

Education

Ph.D. in Political Science — *Durham, NC*
DUKE UNIVERSITY — *2016*

M.A. in Political Science — *Durham, NC*
DUKE UNIVERSITY — *2013*

B.A. in Mathematics and International Studies — *Asheville, NC*
UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE — *2010*

Research Interests

Substantive: Security & conflict, cybersecurity, WMD, counter-proliferation, event data, measurement.
Methodological: Machine learning, Bayesian statistics, natural language processing, forecasting & prediction.

Peer-Reviewed Publications

"Death by Political Party: The Relationship Between COVID-19 Deaths and Political Party Affiliation" — *2021*
World Medical & Health Policy. DOI:10.1002/wmh3.435
with Jingjing Gao.

"Seeing the Forest and the Trees: Detection and Cross-Document Coreference Resolution of Militarized Interstate Disputes" — *2020*
Proceedings of AESPEN 2020, LREC 2020: 35–41

"Multitask Models for Supervised Protest Detection in Texts" — *2019*
Working Notes of CLEF 2019.

"Automated Dictionary Generation for Political Event Coding" — *2019*
Political Science Research and Methods.

"Enemy at the Gates: Variation in Economic Growth from Civil Conflict." — *2017*
Journal of Conflict Resolution: 61(10):2105-2129.
with Shahryar Minhas.

Software

mmtsne   *2017*
A package for estimating *multiple maps t-distributed stochastic neighbor embedding* (multiple maps t-SNE) models in R.
Open source and available on CRAN: https://cran.r-project.org/package=mmtsne

Technical and Policy Publications

"Anomaly Detection in Cyber Network Data Using a Cyber Language Approach"   *2018*
Prepared for the *2018 ASA Symposium on Data Science and Statistics*. Available at arXiv:1808.10742.
with Bartley D. Richardson, Shawn E. Davis, Keegan Hines, and David Pekarek.

"Sequence Aggregation Rules for Anomaly Detection in Computer Network Traffic"   *2018*
Prepared for the *2018 ASA Symposium on Data Science and Statistics*. Available at arXiv:1805.03735.
with Bartley D. Richardson and Shawn E. Davis.

"Network Traffic Anomaly Detection Using Recurrent Neural Networks"   *2017*
Proceedings of the 2017 MSS National Symposium on Sensor & Data Fusion. Available at arXiv:1803.10769.
with Leonardo Apolonio, Antonio Trias, and Jim A. Simpson.

"Small-scale prediction of IEDs in Afghanistan using split-population duration
regression"   *2015*
Submitted to the Office of Naval Research.
with Andreas Beger and Michael D. Ward.

"Comparing GDELT and ICEWS Event Data"   *2013*
Published online. Available at Research Gate.
with Michael D. Ward, Andreas Beger, Josh Cutler, Matthew Dickenson, and Cassy Dorff.

"The Evolution of US Policy towards Iran's Nuclear Program: Lessons for the Obama
Administration"   *2010*
UNC Asheville Journal of Undergraduate Research.

"Iran Likely to Take Accusatory Stance at CWC Review Conference"   *2008*
WMD Insights (April): 39-43.

"Summary of Recent United Nations Security Council, European Union, and United
States Sanctions Against Iran"   *2008*
WMD Insights (April): 44-50.
with Leonard Spector.

"Algeria, Emirates Plan Nonproliferation-Friendly Nuclear Programs; Egypt Keeps
Fuel Cycle Options Open, Rejects Expanded IAEA Monitoring"   *2008*
WMD Insights (June): 2-7.
with Leonard Spector.

Grants & Contracts

Co-PI, UNCC 12-Month Planning Grant ($25,000)	*2020*
Subject Matter Expert, DARPA *SafeDocs*	*2019–2022*
Co-PI, DARPA *Hybrid Fusion*	*2019–2020*
Co-PI, DARPA contract	*2019*
PI, DARPA contract	*2017–2018*
Graduate Studies Fellowship, Duke University	*2011–2016*
Graduate School Conference Travel Fellowship, Duke University	*2015, 14, 13*

Working Papers

"High Resolution Conflict Forecasting with Spatial Convolutions and…"   *Under Review*
Previously presented at the ViEWS Prediction Competition.

"Few-shot Upsampling for Protest Size Detection"   *Under Review*
with Andrew Halterman.

Works in Progress

"0-BlinC: Zero-Shot Bilingual Text Classification without Translation"   *Working paper*
with Yaoyao Dai.

"Digitizing COVID-19 Policy Documents and Measuring Plain Text Fidelity"   *Working paper*
with Jingjing Gao, Ivan Flores Martinez, and Jason Windett.

Invited Talks

Georgia Tech School of Electrical and Computer Engineering   *2019*
Machine Learning Approaches for Cybersecurity Incident Measurement

DC Digital Analytics   *2018*
Multilingual Text Classification with Multitask Neural Networks

Symposium on Data Science and Statistics, American Statistical Association   *2018*
Network Traffic Anomaly Detection Using Recurrent Neural Networks

Conference on Applied Statistics in Defense, American Statistical Association   *2016*
Cyberlanguage: Enhancing cybersecurity through statistical and natural language processing techniques

Conference Presentations

Conference on Language Resources and Evaluation, AESPEN Workshop   *2020*
Annual Meeting of the Southern Political Science Association   *2013, 2019, 2020*
Annual Meeting of the American Political Science Association   *2015, 2018*
Conference on New Directions in Analyzing Text as Data   *2018*
Military Sensing Symposium, National Symposium on Sensor & Data Fusion   *2017*
Annual Meeting of the International Studies Association   *2015*
Annual Meeting of the Midwest Political Science Association   *2013, 2014, 2015*
Duke-UNC International Relations Workshop   *2014*

Teaching Experience

Instructor   *Charlotte, NC*
University of North Carolina at Charlotte   *2019–Present*

- GRAD 8009 & 6009: *Data Science for Social Scientific Inquiry*
- GRAD 6101 & 8101: *Linear Regression*
- POLS 3800: *Independent Study*
- POLS 2220: *Political Science Research Methods*

Invited Lecture   *Arlington, VA*
George Mason University   *Nov. 2017*

- CSI 899: *Computational Research and Applications*

Teaching Assistant for Professor Kyle Beardsley   *Durham, NC*

Duke University   *2013*

- POLSCI 130: *Introduction to Political Inquiry*

Academic Service

Program Committee Member, Reviewer, CASE ACL 2021	*2021*
Reviewer, IEEE/ACM Transactions on Networking	*2020*
Panel Chair, UNC Charlotte Cybersecurity Symposium	*2020*
Program Committee Member, Reviewer, AESPEN LREC 2020	*2020*
Reviewer, British Journal of Political Science	*2020*
Reviewer, IEEE: Transactions on Network and Service Management	*2019*
Reviewer, Political Science Research & Methods	*2018*
Reviewer, International Studies Review	
Chair & Discussant, SPSA New Approaches in the Study of Terrorism and Civil War	*2020*
Discussant, APSA Panel on Prediction	*2015*
Judge, Northern Virginia Regional Science Fair	*2019*

Honors, & Awards

Finalist, Data Visualization Contest, Duke University	*2013*
Graduated summa cum laude, University of North Carolina at Asheville	*2010*
Top Graduating Math Student, University of North Carolina at Asheville	*2010*
Distinction in International Studies, University of North Carolina at Asheville	*2010*
Finalist, Hasbro NERF *Battle of the Ads*	*2010*