Benjamin J. Radford

POLITICAL SCIENTIST · DATA SCIENTIST

4115 S. Four Mile Run Drive, Unit B, Arlington, VA 22204

(828) 674-1173 | benjamin.radford@gmail.com | https://benradford.github.io | benradford

Education

Duke University   *Durham, NC*

PH.D. IN POLITICAL SCIENCE   *2016*

Subfields: Security, Peace, & Conflict and Political Methodology

Automated Learning of Event Coding Dictionaries for Novel Domains with an Application to Cyberspace

University of North Carolina at Asheville   *Asheville, NC*

B.A. IN MATHEMATICS AND INTERNATIONAL STUDIES   *2010*

Research Experience

Principal Investigator & Principal Data Scientist   *Arlington, VA*

SOTERA DEFENSE SOLUTIONS CONTRACTED TO DARPA   *2016–*

- Principal Investigator for a data-driven cybersecurity attribution program of DARPA I2O.
- Principal Data Scientist on *Network Defense*, a DARPA I2O program on machine learning for unsupervised cybersecurity applications.

Senior Data Scientist   *Arlington, VA*

CAERUS ASSOCIATES CONTRACTED TO DARPA   *2015–2016*

- Senior Data Scientist on *Network Defense*, a DARPA I2O program on machine learning for unsupervised cybersecurity applications.

Research Assistant to Professor Michael D. Ward   *Durham, NC*

DUKE UNIVERSITY   *2012–2015*

- Spatial-temporal modeling for C-IED, a force protection program of the Office of Naval Research.
- Statistical forecasting for ICEWS, the Integrated Crisis Early Warning System.

Research Assistant to Professor Joseph M. Grieco   *Durham, NC*

DUKE UNIVERSITY   *2012–2015*

Intern   *Washington, D.C.*

JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES   *2008*

Publications

"Enemy at the Gates: Variation in Economic Growth from Civil Conflict."   *2016*

Journal of Conflict Resolution.

with Shahryar Minhas.

"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 via 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.

Selected Working Papers

"Varieties of Authoritarianism and Peace through Trade, 1950-1999"
Under review.
with Joseph M. Grieco, Christopher F. Gelpi, and Stephen Morgan.

"Embargoes and the Regional Small Arms Trade"
Revise and resubmit.

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.

Teaching Experience

Invited Lecture   *Arlington, VA*
GEORGE MASON UNIVERSITY   *Nov. 2017*
"Clustering techniques for unsupervised machine learning."

Teaching Assistant for Professor Kyle Beardsley   *Durham, NC*
DUKE UNIVERSITY   *2013*
POLSCI 130: *Introduction to Political Inquiry*

Conferences

Presenter   *Springfield, VA*
MILITARY SENSING SYMPOSIUM, NATIONAL SYMPOSIUM ON SENSOR & DATA FUSION   *Oct. 2017*
"Network Traffic Anomaly Detection Using Recurrent Neural Networks"

Invited Talk   *Washington, D.C.*
CONFERENCE ON APPLIED STATISTICS IN DEFENSE, AMERICAN STATISTICAL ASSOCIATION *2016*
"Cyber Language: Enhancing Cybersecurity Through Statistical and Natural Language Processing Techniques"

Conference Paper   *New Orleans, LA*
ANNUAL MEETING OF THE INTERNATIONAL STUDIES ASSOCIATION   *2015*
"Small-scale prediction of IEDs in Afghanistan using split-population duration regression"

Presenter   *San Francisco, CA*
ANNUAL MEETING OF THE AMERICAN POLITICAL SCIENCE ASSOCIATION   *2015*
"Enemy at the Gates: Variation in Economic Growth from Civil Conflict"

Presenter   *Chicago, IL*
ANNUAL MEETING OF THE MIDWEST POLITICAL SCIENCE ASSOCIATION   *2015*
"Enemy at the Gates: Variation in Economic Growth from Civil Conflict"

Presenter   *Durham, NC*
DUKE-UNC INTERNATIONAL RELATIONS WORKSHOP   *2014*
"Embargoes and the Regional Small Arms Trade"

Presenter   *Chicago, IL*
ANNUAL MEETING OF THE MIDWEST POLITICAL SCIENCE ASSOCIATION   *2014*
"Varieties of Authoritarianism and Peace through Trade, 1950-1999"

Presenter   *Chicago, IL*
ANNUAL MEETING OF THE MIDWEST POLITICAL SCIENCE ASSOCIATION   *2013*
"Autocracy Type and Conflict Outcome: Assessing the Relative Performance of Personalist Regimes in War"

Presenter *Orlando, FL*

2013

"Primed for Defense: How I Learned to Start Worrying and Love the Bomb"

Academic Service

Discussant *San Francisco, CA*

2015

Panel on Prediction

Reviewer

2015

Grants, Honors, & Awards

2011–2016 **Graduate Studies Fellowship**, Duke University *Durham, NC*

2015 **Graduate School Conference Travel Fellowship**, Duke University *Durham, NC*

2014 **Graduate School Conference Travel Fellowship**, Duke University *Durham, NC*

2013 **Graduate School Conference Travel Fellowship**, Duke University *Durham, NC*

2013 **Finalist**, Data Visualization Contest, Duke University *Durham, NC*

2010 **Graduated summa cum laude**, University of North Carolina at Asheville *Asheville, NC*

2010 **Top Graduating Math Student**, University of North Carolina at Asheville *Asheville, NC*

2010 **Distinction in International Studies**, University of North Carolina at Asheville *Asheville, NC*

2010 **Finalist**, Hasbro NERF *Battle of the Ads*

Programming

- R
- Python
- Scala
- Spark
- LaTeX
- MapReduce
- Hadoop & HDFS
- SQL

Research Interests

- Political methodology
- Automated event data coding
- Political security and conflict
- Forecasting
- Machine learning
- Cybersecurity