

BRENDAN COOLEY

Email: brendan.cooley@gmail.com

Phone: (443) 758-3242

Web: brendancooley.com

Github: github.com/brendancooley

PROFESSIONAL EXPERIENCE

- 2020-present Senior Data Scientist, Big League Advance, Washington, DC
- Write and estimate models to predict the outcome of baseball games and evaluate minor league baseball players
 - Develop and maintain software for dataset generation, model tuning and evaluation, and data visualization
- 2014-2015 Research Assistant, Center for Strategic and Budgetary Assessments, Washington, DC
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EDUCATION

- 2020 Princeton University, M.A. (2017), Ph.D. (2020), Politics
- **Qualifying exams:** international relations, formal and quantitative methods, political economy
 - **Selected coursework:** statistical learning, causal inference, optimization, game theory, microeconomic theory, international economics, industrial organization
- 2014 University of North Carolina at Chapel Hill, B.A.
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SOFTWARE

- python numpy, scipy, scikit-learn, tensorflow, keras, numpyro, altair
R tidyverse, spatial (sp, rgdal, leaflet), plotly, shiny, Rmarkdown
SQL
Stan
Mathematica (computer algebra)
IPOPT (sparse, large-scale, nonlinear optimization)
Cloud (AWS) S3, CodeArtifact, Lambda, Batch
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RESEARCH

Publication

- 2015 [A Conventional Flexible Response Strategy for the Western Pacific](#)
with James Scouras

Working Papers

1. [Estimating Policy Barriers to Trade](#)
 2. [Trade Policy in the Shadow of Power: Quantifying Military Coercion in the International System](#)
 3. [Gunboat Diplomacy: Political Bias, Trade Policy, and War](#)
 4. [Gunshots and Turf Wars: Inferring Gang Territories from Shooting Reports](#)
with Noam Reich
 5. [How Wide Is the Ethnic Border?](#)
with Scott F Abramson and Bethany Lacina
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TEACHING

[Introduction to Mathematics for Political Scientists](#)

Summer 2018, Summer 2019

Other: International Relations (Teaching Assistant), International Intervention and the Use of Force (Teaching Assistant), International Relations Theory and the Rise of China

Competencies: Applied statistics, data science, game theory, international relations, international political economy