Avery C Ellis

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EDUCATION

University of California, Berkeley, Berkeley, CA
Ph.D. in Political Science (expected May 2031)
Fields: Political Methodology, Political Behavior, American Politics

University of Illinois at Urbana-Champaign, Champaign, IL   Jan. 2025 - May 2025
Non-Degree Coursework in Mathematics
Selected Coursework: Real Analysis

Bowdoin College, Brunswick, ME   Aug. 2019 - May 2024
B.A. (with highest honors), Mathematics and Government & Legal Studies
Selected Coursework: Bayesian Statistics, Advanced Topics in Mathematical Modeling, Algorithms,
Data Structures, Methodologies of Political Behavior, Advanced Quantitative Analysis in Political
Science

RESEARCH INTERESTS

Political methodology, causal inference, political behavior, Bayesian methods, American politics

RESEARCH EXPERIENCE

Modeling the Development & Expression of Political Behavior: A Zallerian Approach
Senior undergraduate honors thesis; awarded highest departmental honors.
Analyzed John Zaller's axiomatic RAS model through competing lenses of information processing
and attitude construction. Proposed extension to Zaller's model and found support for his work
and suggested extension utilizing data from 2016 Brexit referendum. Supervised by Michael Franz.

Using Threat to Value and Contextualize On-Puck Actions (with Matthew Hurley)
Submission to 2021 Big Data Cup; selected as Honorable Mention, Undergraduate Category.
Wrote Markov expected threat model in R to analyze offensive value added by hockey players.
Utilized novel dataset to evaluate player skill in non-traditional offensive categories like puck pos-
session, skating, and passing. Combined discrete Markovian evaluation with contextual game state
analysis to comprehensively measure offensive skill.

CONFERENCE PRESENTATIONS

Ellis, A., Hurley, M. Player Metrics [Panel session]. 2021 Ottawa Hockey Analytics Conference,
virtual. (2021, March 26-27). https://www.youtube.com/watch?v=HxhMuM1YQ_c.

TEACHING EXPERIENCE

Latin School of Chicago, Chicago, IL

- **AP Calculus AB**, Teaching Assistant   Spring 2021

- **Honors Precalculus**, Co-Teacher   Fall 2020 & Spring 2021 (2 sections)

- **Honors Geometry**, Co-Teacher   Fall 2020 & Spring 2021

SELECTED PROFESSIONAL EXPERIENCE

Quantitative Research Associate, Fidelity Investments   Sept. 2025 - Jan. 2026

Analyzed alternative datasets to identify alpha-generating signals in ESG data using Python and SQL. Collaborated with fundamental equity research analysts to define, measure, & backtest drivers of financial materiality. Conducted panel time-series regression to separate ESG factors from traditional financial drivers of returns; published internal research paper quantifying precise impact of unpriced ESG factor and its impact on forward returns.

Data Analyst, Fidelity Investments   Oct. 2024 - June 2025

Shadowed senior statisticians to observe development of causal inference-based synthetic control matching tool. Conducted regression utilizing R and SQL to identify customer-level and client-level drivers of cost increases. Transformed and displayed data in Power BI and Tableau to outline participant demographics and eliminate repetitive ad-hoc requests.

AWARDS

Highest Honors, Bowdoin College Department of Government & Legal Studies   May 2024
2nd Team, All-Academic, American Collegiate Rowing Association   May 2023 & 2024
Honorable Mention, Big Data Cup   March 2021

SKILLS

Languages: Python (numpy, pandas, statsmodels, scipy, scikit-learn), R (tidyverse, rstan), SQL (MySQL, PostgreSQL), Git, LaTeX, Java

Statistical Techniques: MCMC (Gibbs, Metropolis-Hastings, Hamiltonian Monte Carlo), Bayesian Methods, Regression (OLS, MLE, Bayesian), Time-Series, Hierarchical Modeling, Bayes Factors

LEADERSHIP

Bowdoin Rowing   Sept. 2019 - May 2024

Men's Steward (2023 - 2024) and Operations Steward (2022 - 2023)

Organized daily transportation for 70+ athletes, supported and coordinated logistics for weekly races and broader team culture. Earned team's first-ever top-50 nationwide ranking, including all D1, D2, and D3 schools (row2k cMax, 2022). Committed 30 hrs/week during spring & fall seasons, 20 hrs/week during winter season to team and individual training.

Selected Results: 2023 American Collegiate Rowing Association National Champion, Men's Varsity 4+; 2nd (Men's Varsity 4+, 2023) and 3rd (Men's Junior Varsity 4+, 2022), Dad Vail Regatta; 8th (Men's Collegiate 4+, 2022), Head of the Charles.

Camp Thunderbird for Boys   May-August, 2017 - 2024

Extended Trip Leader (2022-2024); Trip Leader (2019, 2021); Cabin Counselor (2017-2019)

Organized and led multi-week wilderness trips, 6-week van trips for 10 campers; managed budget, itinerary, safety, and logistics. Collaborated in teams of 2-3 to teach backcountry education, skill development, personal and physical growth. Safely coordinated medical and non-medical evacuations under duress and without supervision. Supported campers from diverse backgrounds in unfamiliar environment by building strong relationships and curating meaningful, differentiated experiences.