BRIAN HESEUNG KIM

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EDUCATION

University of Virginia – Charlottesville, VA 2022
- **Ph.D.** in Education Policy at the School of Education
- Dissertation: "Applying Data Science Techniques to Promote Equity and Mobility in Education and Public Policy"
- Committee: Benjamin L. Castleman, Daphna Bassok, Vivian C. Wong, Brian Wright

University of Virginia – Charlottesville, VA 2019
- **M.P.P.** from the Frank Batten School of Leadership and Public Policy

Bowdoin College – Brunswick, ME 2013
- **B.A.** in English and Economics with Teaching and Music Minors
- Maine State Teacher Certification in English and Social Studies

FELLOWSHIPS, AWARDS, & HONORS

National Academy of Education and Spencer Foundation – Washington, DC
- NAEd/Spencer Dissertation Fellowship Recipient ($27,500; highly selective) 2021 – 2022

University of Virginia School of Education – Charlottesville, VA
- IES Pre-Doctoral Fellowship - Virginia Education Sciences Training ($30,000/yr) 2017 – 2021
- Member of Pi Alpha Alpha Honor Society for Public Affairs & Administration 2018

Stanford University and University of California, Berkeley – Virtual
- Member of Bay Area Summer Institute in Computational Social Science cohort (selective) 2020

American Enterprise Institute – Washington, DC
- Member of Education Policy Academy graduate student cohort (selective) 2019

Bowdoin College – Brunswick, ME
- Snow Family Teacher Scholar Fellowship 2014
- Robert L. M. and Nell G. Ahern Scholarship 2013
- Sarah and James Bowdoin Scholar (Dean's list) 2013
- Maine Community Service Fellowship (selective) 2012

GRANTS

Bill & Melinda Gates Foundation. "Test-Optional Admissions Policy Equity Outcomes – Examining Bias and Inequality in Non-Standardized Components." Co-Principal Investigator with Julie J. Park, OiYan Poon, Kelly Rosinger, and Dominique Baker. $1,424,752. 2021-2023.

Ascendium Education Group. "Career Advising Tools and Outreach for Low-Income College Graduates - Planning Phase." Co-Principal Investigator with Benjamin L. Castleman. $268,157. 2021-2022.

RESEARCH ARTICLES

Peer-Reviewed Publications

Rodriguez-Segura, D., **Kim, B.H**. (2021). The Last Mile in School Access: Mapping Education Deserts in Developing Countries. *Development Engineering,* 100064. Open-source codebase available via GitHub. https://doi.org/10.1016/j.deveng.2021.100064

Manuscripts Under Review

Kim, B.H., Bird, K.A., Castleman, B.L. (revise and resubmit at *Education Finance and Policy*). *Crossing the Finish Line but Losing the Race? Socioeconomic Inequalities in the Labor Market Trajectories of Community College Graduates*. Working paper available online.

Working Papers

Kim, B.H. (2022). *What's in a Letter? Using Natural Language Processing to Investigate Systematic Differences in Teacher Letters of Recommendation*. Dissertation manuscript.

Kim, B.H., Meyer, K., Choe, A. (2022). *Gauging Engagement: Measuring Student Response to a Large-Scale College Advising Field Experiment*. Open-source codebase available via GitHub. Working paper available online.

Technical Reports & Policy Briefs

Kim, B.H. (2021). *Supporting Students at Any Cost? Examining the Dynamics of Teacher Out-of-Pocket Spending, Student Demographics, and Teacher Autonomy*. Replication code and pre-analysis plan available via GitHub. Technical report available online.

Castleman, B.L., Bird, K.A., **Kim, B.H**. (2019). *Pathways to Success: Analyzing Program-level Heterogeneity in Broad Labor Market Outcomes for a State Community College System*. Manuscript available on request.

INVITED TALKS

Kim, B.H. (2021, November). *What's in a Letter? Investigating the Prevalence of Linguistic Bias in Teacher Letters of Recommendation*. Invited research presentation for the Common App Researcher Meeting.

Kim, B.H. (2021, November). *What's in a Letter? Investigating the Prevalence of Linguistic Bias in Teacher Letters of Recommendation*. Invited research presentation for the Bowdoin College Admissions reader training workshop.

Bruno, P., Doromal, J., Husain, A., **Kim, B.H**., Murray, B. (2021, October). *The Hidden Curriculum of the Job Market*. Invited panel discussion for the Association of Education Finance and Policy Scholars of Color series (virtual).

Kim, B.H., Li, J., Radiyat, M., Rhue, L. A. (2021, March). *Data & Assumptions*. Invited panel discussion for the DonorsChoose Brownbag Seminar series (virtual).

Kim, B.H. (2020, June). *Assessing the Role of Class Size Restrictions in Mitigating Community College Student COVID-19 Exposure through Student Network Analysis*. Invited research presentation for the Assistant Vice Chancellor for Research of the Virginia Community College System (virtual).

Castleman, B.L., **Kim, B.H**. (2020, April). *Using Data Science to Address Critical COVID-19 Workforce Needs in Virginia*. Invited research discussion for the Frank Batten School of Leadership and Public Policy "Expert Chat" Series (virtual).

Finnegan, C., **Kim, B.H**., Wong, V.C., Wright, B. (2019, November). *Data & Education*. Invited panel discussion at 5th Annual University of Virginia School of Data Science Datapalooza, Charlottesville, VA.

Kim, B.H. (2019, May). *Pathways to Success: Analyzing Program-level Heterogeneity in Broad Labor Market Outcomes for a State Community College System*. Invited research presentation to the Virginia Community College System Academic and Student Affairs Council Subcommittee on Institutional Research, Richmond, VA.

CONFERENCE PRESENTATIONS

Kim, B.H. (2022, March). *What's in a Letter? Using Natural Language Processing to Investigate Systematic Differences in Teacher Letters of Recommendation*. Paper presentation at 47th Annual Conference of Association of Education Finance and Policy, Denver, CO.

Kim, B.H., Meyer, K., Choe, A. (2021, March). *Using Natural Language Processing to Investigate Treatment Variation in Education: Evidence from a Large-Scale College Advising Field Experiment*. Paper presentation at 46th Annual Conference of Association of Education Finance and Policy, Virtual.

Kim, B.H., Meyer, K., Choe, A. (2020, November). *Do College Advising Styles Matter? Applying Natural Language Processing to Understand Treatment Variation*. Paper presentation at 42nd Annual Conference of Association for Public Policy Analysis and Management, Virtual.

Rodriguez-Segura, D., **Kim, B.H**. (2020, September). *Traversing the Last Mile in School Enrollment: Using GIS Data to Identify Education Deserts in Developing Countries*. Paper presentation accepted at 11th Annual University of Virginia Hunter Student Research Conference, Charlottesville, VA.

Kim, B.H., Castleman, B.L., Bird, K.A. (2020, March). *Crossing the Finish Line but Losing the Race: Socioeconomic Inequalities in Labor Market Trajectories Among Community College Graduates*. Paper presentation at 45th Annual Conference of Association of Education Finance and Policy, Virtual.

Castleman, B.L., Bird, K.A., **Kim, B.H**. (2019, March). *Pathways to Success: Analyzing Program-level Heterogeneity in Broad Labor Market Outcomes for a State Community College System*. Paper presentation at 44th Annual Conference of Association of Education Finance and Policy, Kansas City, MO.

RESEARCH EXPERIENCE

The Common Application, Inc. – Arlington, VA 2021 – Present

Data Scientist and Applied Research Lead, Data Analytics and Research Team

Primary research projects:

- Revisiting financial aid processes in the application process to improve college accessibility and success for low-income students
- Expanding organizational capacity for large-scale natural language processing analyses on student applications

- Refining data warehouse ETL processes to improve robustness, sustainability, workflow, and data integrity
- Incorporating public education data sets into internal data warehouse to facilitate internal and external research

University of Virginia School of Education – Charlottesville, VA 2017 – 2022
Graduate Research Assistant, EdPolicyWorks and Nudge⁴ Solutions Lab
Primary research projects:

- What's in a letter? Using natural language processing to investigate the prevalence of linguistic biases in teacher letters of recommendation for postsecondary applications
- New strategies to support career entry for community college graduates: Augmenting intensive career advising services with a novel job recommendation algorithm and machine learning
- Can predictive analytics improve the efficiency of high-cost interventions? Evidence from an intensive college advising program
- Assessing the role of class size restrictions in mitigating community college student COVID-19 exposure through network analysis
- Exploring heterogeneous treatment effects with causal forests: Evidence from a large-scale nudge experiment

DonorsChoose – New York, NY 2020 – 2021
Data Science Fellow, Data Science and Analytics Team
Primary research projects:

- Supporting Students at Any Cost? Examining the dynamics of teacher out-of-pocket spending, student demographics, and teacher autonomy
- Developing mission-oriented and data-driven equity metrics for a nation-wide school fundraising platform
- Measuring project and fundraising success among higher- and lower-resourced schools across ten states

Virginia Department of Education – Richmond, VA 2019
Research Intern, Office of Research and Office of Equity and Community Engagement
Primary research projects:

- Implementing modern visualization techniques to improve the accessibility and utility of ESSA-mandated school accountability dashboards
- Investigating new metrics to better understand racial equity in education throughout Virginia

Senator George J. Mitchell Scholarship Research Institute – Portland, ME 2012 – 2013
Community Action Fellow / Research Intern
Primary research projects:

- Assessing the state of higher education access and achievement across Maine high schools using Maine DOE and National Student Clearinghouse data (annual state report)
- Visualizing the Institute's mission, student demographics, and impact on academic outcomes for stakeholders

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TEACHING EXPERIENCE

University of Virginia – Charlottesville, VA

- (Graduate) LPPS5740: Data Science for Public Leaders, *Adjunct Faculty/Co-developer* Scheduled 2021
  Survey course on emerging data science applications and ethical considerations for public policy and social sciences research [Open-Source Course Materials]
- (Graduate) LPPP5540: Public Interest Data Lab, *Project Advisor* 2020
  Introductory data science methods for community-based public interest research
- (Graduate) EDLF5310: Data Management for Social Science Research, *Teaching Asst.* 2019
  Introductory data management and statistical analysis [Teaching Evaluations]
- (Workshop) Introduction to GitHub for Education Policy Researchers, *Instructor* 2021
  Part of EdPolicyWorks Graduate Student Methodology Workshop series

- (Workshop) Communicating Research: Best Practices for Presenting and Visualizing Quantitative Evidence, *Instructor* — 2021
  Introductory workshop for underrepresented undergraduate and graduate students preparing for careers in Education Policy
- (Workshop) Graduate School Admissions for First-Generation Students, *Facilitator* — 2019
- (Workshop) Introduction to Data Visualization, *Instructor* — 2019
  Part of Summer Undergraduate Research Program (SURP) workshop series for underrepresented undergraduates interested in research careers
- (Workshop) Introduction to R, *Instructor* — 2018, 2019
  Part of SURP workshop series
- (Workshop) Introduction to Web Scraping, *Co-instructor* — 2018
  Part of EdPolicyWorks Graduate Student Methodology Workshop series

Yarmouth High School – Yarmouth, ME
- (Secondary) 9th Grade English Language Arts, *Teacher* [Teaching Evaluations] — 2014 – 2017
- (Secondary) Non-Fiction and Rhetoric, *Teacher* [Teaching Evaluations] — 2014 – 2017

Johns Hopkins Center for Talented Youth – Lancaster, PA
- (Secondary) Probability and Game Theory, *Instructor* — 2015 – 2016
  Accelerated summer course for 7-10th grade gifted & talented students; roughly undergraduate equivalent [Teaching Evaluations]

Bowdoin College – Brunswick, ME
- (Undergraduate) ECON2323: Economics of Information, *Teaching Assistant* — 2014
  Introductory course on game theory and behavioral economics

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COMMUNITY & PROFESSIONAL SERVICE

Reviewer
- Conference Proposals: *Association for Public Policy Analysis and Management, Association for Education Finance and Policy*, *Hunter Student Research Conference*
- Manuscripts: *Economics of Education Review*, *AERA Open, Nature: Humanities and Social Sciences Communications*

Bowdoin College – Brunswick, ME
- Regional Admissions Volunteer Organization, *Regional Student Interviewer* — 2017 – Present
- Bowdoin College Alumni Fund, *Class Fundraising Agent* — 2013 – Present

University of Virginia School of Education – Charlottesville, VA
- Curry Student Travel Fund, *Committee Co-chair* — 2019 – 2021
- EdPolicyWorks Graduate Student Office, *Community Coordinator* — 2018 – 2021
- EdPolicyWorks Graduate Student Office, *Methodology Workshop Coordinator* — 2018 – 2021
- Curry Common Read, *EdPolicyWorks Discussion Co-facilitator* — 2020
- Summer Undergraduate Research Program, *Graduate Student Mentor* — 2018

University of Virginia Frank Batten School of Leadership and Public Policy – Charlottesville, VA
- Batten Diversity and Inclusion Board, *Student Member* — 2018 – 2019
- Virginia Policy Review, *Associate Editor* and *Website Administrator* — 2017 – 2018

FairVote Virginia – Charlottesville, VA
- Campaign and Media Volunteer — 2017 – 2019

Yarmouth High School – Yarmouth, ME

- Faculty Leadership Team, *Member* 2016 – 2017
- 9th Grade Faculty Team, *Team Leader* 2016 – 2017

RESEARCH INTERESTS

Education Policy

- Postsecondary access and success, postsecondary labor market outcomes, community colleges

Data Science

- Intersection of data science and policy research, natural language processing techniques for scalable text analytics, ethical application of predictive analytics/machine learning methods to educational contexts

Economics

- Labor market matching and outcomes, socioeconomic mobility, returns to individual educational investments, behavioral/informational nudges, game theoretic decision-making frameworks

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SKILLS & PROFICIENCIES

Basic	●○○	Can complete most tasks with supervision
Intermediate	●●○	Can complete most tasks independently
Advanced	●●●	Can instruct and supervise others

Additional Analytic Skillsets

Bayesian Inference	●○○
Data Visualization (static/animated/ interactive)	●●●
Geospatial / Mapping Analysis	●●○
High-Performance Computing	●●○
Network Analysis	●●○
Open-Source Development	●●○
Predictive Analytics	●●●
Text Mining and Analytics (NLP)	●●●
Web Scraping	●●●

Data Analysis and Coding

D3.js	●●○
GitHub	●●●
HTML / CSS	●●●
JavaScript	●○○
Jupyter Notebook	●●○
Microsoft Access	●○○
Microsoft Excel	●●●
Python	●●○
QGIS	●●○
Qualtrics	●●○
R / RStudio	●●●
R Shiny	●●○
SQL	●●○
Stata	●●●
Tableau	●●○
Unix / Bash	●○○

Content Creation

Adobe Illustrator	●○○
Adobe Lightroom	●○○
Adobe Photoshop	●●●
Amazon Kindle Publishing	●●○
Audio Production and Editing	●●○
LaTeX / Overleaf	●○○
Live Content Streaming	●●○
Sony Vegas Video Editor	●●○
Website Design	●●○
WordPress	●●●
YouTube Publishing	●○○

PROFESSIONAL AFFILIATIONS

- Association for Computational Linguistics (**ACL**)
- Association for Education Finance and Policy (**AEFP**)
- American Educational Research Association (**AERA**)
- Association for Public Policy Analysis and Management (**APPAM**)
- Society for Research on Educational Effectiveness (**SREE**)