

# BRIAN HESEUNG KIM

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## EDUCATION

- University of Virginia** – Charlottesville, VA Expected 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
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## FELLOWSHIPS, AWARDS, & HONORS

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

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## 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*. Manuscript available on request.

### Working Papers

**Kim, B.H.**, Meyer, K., Choe, A. (2021). *Using Natural Language Processing to Investigate Treatment Variation in Education: Evidence from a Large-Scale College Advising Field Experiment*. Manuscript available on request.

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.

### 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*. Technical report [available online](#); replication code and pre-analysis plan [available via GitHub](#).

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## 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 5<sup>th</sup> 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.

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## CONFERENCE PRESENTATIONS

**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 46<sup>th</sup> 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 42<sup>nd</sup> 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 11<sup>th</sup> 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 45<sup>th</sup> 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 44<sup>th</sup> Annual Conference of Association of Education Finance and Policy, Kansas City, MO.

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## 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 – Present  
*Graduate Research Assistant, EdPolicyWorks and Nudge<sup>4</sup> 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) 9<sup>th</sup> 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 7-10<sup>th</sup> 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

**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*

**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
- 9<sup>th</sup> 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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## 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**)

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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	●○○