

# BRIAN HESEUNG KIM

bkim@commonapp.org • [www.brhkim.com](http://www.brhkim.com)

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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
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## FELLOWSHIPS, AWARDS, & HONORS

- Association for Education Finance and Policy** – Gilbert, AZ 2023
- Jean Flanigan Outstanding Dissertation Award Honorable Mention
- National Academy of Education and Spencer Foundation** – Washington, DC 2021 – 2022
- NAEd/Spencer Dissertation Fellowship Recipient (\$27,500; highly selective)
- University of Virginia School of Education** – Charlottesville, VA 2017 – 2021
- IES Pre-Doctoral Fellowship - Virginia Education Sciences Training (\$30,000/yr)
  - Member of Pi Alpha Alpha Honor Society for Public Affairs & Administration
- Stanford University and University of California, Berkeley** – Virtual 2020
- Member of Bay Area Summer Institute in Computational Social Science cohort (selective)
- American Enterprise Institute** – Washington, DC 2019
- Member of Education Policy Academy graduate student cohort (selective)
- 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

**Kim, B. H.**, Bird, K.A., Castleman, B.L. (2022). Crossing the Finish Line but Losing the Race? Socioeconomic Inequalities in the Labor Market Trajectories of Community College Graduates. *Education Finance and Policy*. Open-access working paper [available online](#).  
[https://doi.org/10.1162/edfp\\_a\\_00392](https://doi.org/10.1162/edfp_a_00392)

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>

### Under Review

Bartanen, B., Kwok, K., Avitabile, A., and **Kim, B. H.** (2023). *Why Do You Want to Be a Teacher? A Natural Language Processing Approach*. Open-access working paper [available online](#).

Park, J., **Kim, B. H.**, Wong, N., Zheng, J., Breen, S., Lo, P., Baker, D., Rosinger, K., Nguyen, M. H., & Poon, O. (2023). *Inequality Beyond Standardized Tests: Trends in Extracurricular Activity Reporting in College Applications Across Race and Class*. Open-source codebase [available via GitHub](#). Open-access working paper [available online](#).

**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](#).

### 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 version](#).

### Technical Reports & Policy Briefs

**Kim, B. H.**, Freeman, M., Kajikawa, T., Karimi, H., & Magouirk, P. (2022). *Unpacking Applicant Race and Ethnicity*. Common App Research Briefs. Brief parts [one](#) and [two](#) available online.

**Kim, B. H.**, Castleman, B. L., Song, Y., & Choe, A. (2022). *New Strategies to Support Career Entry for Community College Graduates: Augmenting Intensive Career Advising Services with a Novel Job Recommendation Algorithm and Machine Learning*. Work generously supported by the Ascendium Education Group. Final project report [available online](#). Open-source codebase available via [GitHub](#).

**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.

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## INVITED TALKS

- Baker, T., **Kim, B. H.**, Lombardi, M., Olson, G., Pina, M. (2023, June). *Application Integrity in the AI Era*. Invited panel discussion at the annual Common App Illuminate conference.
- Kim, B. H.** (2021, November). *What's in a Letter? Investigating the Prevalence of Systemic Differences 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

- Park, J., **Kim, B. H.**, Wong, N., Lo, P., Breen, S., Nguyen, M. H., Baker, D., Rosinger, K., Zheng, J. (2022, November). *Inequality beyond Standardized Tests: Understanding How Extracurricular Activities Vary Across Race, Socioeconomic Status, and High School Type*. Paper presentation at Annual Conference of Association for the Study of Higher Education, Las Vegas, NV.
- 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 47<sup>th</sup> 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 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  
*Senior Data Scientist, Data Analytics and Research Team*

Primary research projects:

- Improving access to the postsecondary application process for low-income students with a targeted school counselor informational intervention
- Disaggregating trends in application behaviors, individual resources, and college readiness among detailed racial/ethnic background groups within standard race/ethnicity categories
- 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 Maryland, College Park** – College Park, MD 2021 – Present  
*Visiting Faculty Specialist, College of Education*

Primary research projects:

- Examining disparities in college applicants' reporting of extracurricular leadership and awards
- Analyzing high school counselor letters of recommendation to identify systemic differences in language

**University of Virginia School of Education** – Charlottesville, VA 2017 – 2022  
*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 systemic differences 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
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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
- 9<sup>th</sup> Grade Faculty Team, *Team Leader* 2016 – 2017

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## 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 Education Finance and Policy (**AEFP**)
- American Educational Research Association (**AERA**)
- Association for Public Policy Analysis and Management (**APPAM**)
- Association for the Study of Higher Education (**ASHE**)
- 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<br>(static/animated/<br>interactive) | ●●● |
| Geospatial /<br>Mapping Analysis                        | ●●○ |
| High-Performance<br>Computing                           | ●●○ |
| Network Analysis  | ●●○ |
| Open-Source<br>Development                              | ●●○ |
| Predictive Analytics                                    | ●●● |
| Text Mining and<br>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<br>Publishing     | ●●○ |
| Audio Production<br>and Editing | ●●○ |
| LaTeX / Overleaf                | ●○○ |
| Live Content<br>Streaming       | ●●○ |
| Sony Vegas Video<br>Editor      | ●●○ |
| Website Design                  | ●●○ |
| WordPress                       | ●●● |
| YouTube<br>Publishing           | ●○○ |