BRIAN HESEUNG KIM

bkim@commonapp.org • www.brhkim.com

EDUCATION

University of Virginia – Charlottesville, VA   2022
- **Ph.D.** in Education Policy at the School of Education
- <u>Dissertation</u>: "Applying Data Science Techniques to Promote Equity and Mobility in Education and Public Policy"
- <u>Committee</u>: 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
- Jean Flanigan Outstanding Dissertation Award Honorable Mention   2023

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-PI 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-PI with Benjamin L. Castleman. $268,157. 2021-2022.

RESEARCH ARTICLES

<u>Peer-Reviewed Publications</u>

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

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

<u>Under Review</u>

Kim, B. H., Park, J., Lo, P., Baker, D., Wong, N., Breen, S., Truong, H., Zheng, J, Rosinger, K., & Poon, O. (2024). *Inequity and College Applications: Assessing Differences and Disparities in Letters of Recommendation from School Counselors with Natural Language Processing.* Open-access working paper available online.

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. (2023). *Gauging Engagement: Measuring Student Response to a Large-Scale College Advising Field Experiment.* Codebase available via GitHub. Working paper available online.

<u>Working Papers</u>

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.

<u>Technical Reports & Policy Briefs</u>

Kim, B. H., Armstrong, E., Freeman, M., Hughes, R., Kajikawa, T., & Nolan, S. (2024). *First-generation Status in Context.* Common App Research Briefs. Brief parts one, two, and three available online.

Park, J. J., Zheng, J., & **Kim, B. H**. (2023). *Unveiling the Inequalities of Extracurricular Activities in Admissions.* Change: The Magazine of Higher Learning, 55(5), 45-54.

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.

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 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., Park, J., Lo, P., Baker, D., Wong, N., Breen, S., Truong, H., Zheng, J, Rosinger, K., & Poon, O. (2024). *Inequity and College Applications: Assessing Differences and Disparities in Letters of Recommendation from School Counselors with Natural Language Processing*. Paper presentation at Annual Conference of Association of Education Finance and Policy, Baltimore, MD.

Kim, B. H., Park, J. J., Lo, P., Zheng, J., Rosinger, K., Baker, D., Poon, O. A., (2023, August). *Inequality and College Applications: Examining Letters of Recommendation Submitted by High School Counselors*. Paper presentation at Annual Conference of American Sociological Association, Philadelphia, PA.

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 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
Director of Data Science, Research, and Analytics, 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 – 2024
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 Nudge⁴ 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   2021
  Visualizing Quantitative Evidence, *Instructor*
  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) <u>Introduction to Data Visualization</u>, *Instructor*   2019
    Part of Summer Undergraduate Research Program (SURP) workshop series
    for underrepresented undergraduates interested in research careers
- (Workshop) <u>Introduction to R</u>, *Instructor*   2018, 2019
    Part of SURP workshop series
- (Workshop) <u>Introduction to Web Scraping</u>, *Co-instructor*   2018
    Part of EdPolicyWorks Graduate Student Methodology Workshop series

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

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

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

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COMMUNITY & PROFESSIONAL SERVICE

Reviewer
- <u>Conference Proposals</u>: *Association for Public Policy Analysis and Management, Association for Education Finance and Policy, Hunter Student Research Conference*
- <u>Manuscripts</u>: *Education Finance and Policy, 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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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**)

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	●○○