Emma Klugman

eklugman@g.harvard.edu
emmaklugman.github.io/

Education

2018-Present   *PhD (expected May 2024)*, Harvard University, Cambridge, MA.
Major: Education Policy and Program Evaluation
Minor: Data Science

2018   *BA*, Harvard College, Cambridge, MA.
Major: Statistics
Minor: Computer Science

Academic Publications

Forthcoming   **Emma M. Klugman**, Gerhard Sonnert, and Philip M. Sadler. Who Takes Stats in US High Schools? Backgrounds, Interests, *&* Aspirations. *Proceedings of the Satellite Conference of the International Association for Statistical Education (IASE)* [Dissertation Ch. 2]

2023   **Emma M. Klugman** (2023). Do First Encounters Make or Break New Users? Using Text Features in the First Comment to Predict New User Return on Reddit. *The Journal of Social Media in Society.* [Open-Access Link]

2022   Jodi M. Gilman, Mallika T. Iyer, Emma G. Pottinger, **Emma M. Klugman**, Dylan Hughes, Kevin Potter, Brendon Tervo-Clemmens, Joshua L. Roffman, and A. Eden Evins (2022). State-Level Recreational Cannabis Legalization Is Not Differentially Associated with Cannabis Risk Perception Among Children: A Multilevel Regression Analysis. *Cannabis and Cannabinoid Research.* doi.org/10.1089/can.2022.0162

2021   **Emma M. Klugman**, Lily An, Zachary Himmelsbach, Sophie L. Litschwartz, and Tara P. Nicola (2021). Commentary: The Questions We *Should* Be Asking About Socially Responsible College Admission Testing. *Educational Measurement: Issues and Practice.* doi.org/10.1111/emip.12449 [Open-Access Link]

2020   **Emma M. Klugman** and Andrew D. Ho (2020). How Can Released State Test Items Support Interim Assessment Purposes in an Educational Crisis? *Educational Measurement: Issues and Practice.* doi.org/10.1111/emip.12390 [Open-Access Link]

Teaching Experience

2021-2022   Instructor on Education for HGSE A218A: Big Data, Surveillance, Algorithmic Bias, and Ethics in Education Data Science, an original course

2022-2023   Teaching Fellow for Math Q: Quantitative Analysis for Economics and the Social Sciences, with Dr. Brendan Kelly

2022   Teaching Fellow for HGSE S010B: Designing Surveys and Questionnaires: Principles and Methods, with Dr. Joe McIntyre

2019 *&* 2022   Teaching Fellow for Applied Computation 221: Critical Thinking in Data Science, with Prof. James Waldo (2019) *&* Prof. Michael D. Smith (2022)

2021   Teaching Fellow for HGSE S43/Stat 151: Multilevel and Longitudinal Models, with Prof.

Luke Miratrix

2020-2021   Course Development Fellow and Teaching Fellow for HGSE S59: Quantitative Text Analysis for Education Research, with Prof. Sebastian Munoz-Najar Galvez

2021   Teaching Fellow for HGSE S22: Introduction to Statistical Computing and Data Science in Education, with Prof. Luke Miratrix

2020   Teaching Fellow for HGSE S61: Statistical and Psychometric Methods for Educational Measurement, with Prof. Andrew Ho

2019   Senior Teaching Fellow for Evidence for Decisions, a course in the Harvard Kennedy School's Public Leadership Credential, with Dr. Teddy Svoronos

2018   Quantitative Reasoning Mentor at Crimson Summer Academy

2017   Teaching Fellow for Stat 100: Introduction to Quantitative Methods for the Social Sciences and Humanities, with Prof. Kerrie Nelson

2016-2017   Peer Tutor for Physics and Statistics at Harvard Bureau of Study Counsel

2016   Mathematics/Statistics Teacher Aide at Otumoetai College, Tauranga, New Zealand

Manuscripts under Review

- **Emma M. Klugman**, Brendan Kelly, Erica Dinkins, Laura J. Kornish, Elizabeth L. Grulke, John B. Geddes, Alan Garfinkel, and Eric J. Deeds. Transforming Math Education: A Comparative Study of Four Innovative College Courses.
- **Emma M. Klugman**. Gender Gaps on Reddit: a Large-Scale, Quantitative, Survival Analysis of Account Persistence.
- **Emma M. Klugman** and Nicholas E. Klugman. Interpretable Contraceptive Effectiveness: A New Approach to Calculating and Communicating Long-Term Risks. (co-first authorship)

Manuscripts in Preparation

- **Emma Klugman**, "Measuring Modern vs. Traditional Approaches to Statistics & Data Science Education in a Large-Scale Text Analysis of Syllabi Data." - *Dissertation Ch. 1*
- **Emma Klugman** and Anna Davydova, "Testing the Interpretability of Machine Learning Decision Sets by Young People" - *Dissertation Ch. 3*
- Daniel Li Chen, Hee Kwon Seo, Youngkwang Jeon, Pranjal Chandra, Peter Hickman, and **Emma Klugman**, "How Do Youths Learn Altruism and Equity? Estimating the Impact of Embedded Ethics in Education on Social Preferences." - *World Bank project. Pre-registered analysis plan here. Midline and endline data collected, analyses and draft in progress.*
- Will Brannon and **Emma Klugman**, "Heterogeneous Treatment Effect Estimation in Education Research using Meta-Learners: A Re-analysis of the Tennessee STAR Class Size Experiment"
- Reagan Mozer, Zach Branson, **Emma Klugman**, Zhiwei Kou, and Luke Miratrix, "Assessing Gender Disparities in Textual Response on Reddit.com"

Conference Participation

2024 — Presenter of "Measuring Text: A Framework for Developing and Validating Scales for Text Analysis" in "Text & Measurement: Critical Approaches to Measuring Text & Measuring Our Field" at National Council on Measurement in Education conference: NCME Annual Meeting.

2023 — Presenter of "Who Takes Stats in US High Schools? Backgrounds, Interests, & Aspirations" at International Association for Statistical Education conference: IASE 2023.

2022 — Presenter of "An Exploration of Test Optional Policies' Impact on International Students' Applications" in "Test Optional Policy: The Current Trends and Impact on Applications and Admissions" at National Council on Measurement in Education conference: NCME Annual Meeting.

2022 — Invited Moderator and Chair of AERA Presidential Session "What Happened to Diversity and Equity When Admissions Tests Became Optional" at American Educational Research Association conference: AERA Annual Meeting.

2022 — Session Organizer of "What Does A Socially Responsible Future Look Like For Admissions Testing? Vision, next steps, and a research agenda" and Presenter of "The Questions We *Should* Be Asking About Socially Responsible College Admission Testing" at NCME Annual Meeting

2022 — Presenter of "Steal This Resource: Weekly Reflections Template to Scaffold Student Self-Efficacy" at New England Community for Mathematics Inquiry in Teaching (NE-COMMIT) Fall Conference

2021 — Presenter of "How Can Released State Test Items Support Interim Assessment Purposes in an Educational Crisis?" in "The Impact of COVID-19 on Educational Measurement, Part 1: K-12 Assessment" at NCME Annual Meeting

Research Experience

2022-2023 — Consultant with the National Center for the Improvement of Educational Assessment, carrying out data cleaning, analysis, simulation, and reporting work for:
- "Re-evaluating the Efficiency and Efficacy of Annual Census Standardized Testing for Accountability Purposes" project, commissioned by the Gates Foundation and Walton Family Foundation
- "Stackable Instructionally-embedded Portable Science (SIPS) Assessments Project", for Nebraska Department of Education, funded by U.S. Department of Education

2021 — Research and Measurement Sciences Intern with Educational Testing Services (ETS) in their Summer Research and Measurement Sciences (RMS) Internship Program

2019-2020 — Psychometric Research Assistant with Prof. Andrew Ho on Delawareans for Educational Opportunity v. Carney

2018 — Psychometric Research Assistant with Prof. Andrew Ho, collecting state testing reliability data for The Educational Opportunity Project at Stanford University

2018 — Research Assistant for Drs. Phil Sadler and Gerhard Sonnert, conducting literature review for NSF grant proposal in Statistics Education

2017 — Summer Data Scientist with Prof. Luke Miratrix, programming and analyzing data for big data project using text analysis with Reddit.com data

Awards and Scholarships

2021-Present **Co-PI** for World Bank Development Impact Evaluation (DIME) Pilot Grant for project "How do youths learn justice? An exploratory grant proposal for piloting an embedded-ethics digital literacy curriculum" in Tanzania and India, $30,000 USD. (Ongoing)

2021 Certificate of Distinction in Teaching for the Fall 2021 semester by the Office of Undergraduate Education

Other Experience

2020-2023 HGSE Advisor/HGSE Guide for Ed.M. students in the Education Policy & Analysis program at Harvard Graduate School of Education

2020-2021 Residential Advisor (Proctor) and First-Year Academic Advisor at Harvard College

2019 Visiting Scholar in Trial Design & Evaluation at The Behavioural Economics Team of the Australian Government, Department of the Prime Minister and Cabinet, Australia.

2018-2019 Mentor at the Crimson Summer Academy

2012-2013 School Governing Board Member at Otumoetai College, Tauranga, New Zealand

Talks & Lectures

2022 "College Admission Tests and Social Responsibility." Brown bag session for NCME Graduate Students.

2022 "Data Bias". Guest lecture for Harvard Applied Computation 221: Critical Thinking in Data Science.

2019 Behavioural Economics Team of Australia - Technical Capability Seminar Series:
- "Programme Evaluation and Causal Inference"
- "Missing Data Imputation"
- "Categorical Data Techniques"
- "De-identification and Re-identification of Sensitive Data"

Academic Service

2020-Present Chair, Moderator, Discussant, & Peer Reviewer for AERA Annual Meeting

2020-Present Peer Reviewer for National Council on Measurement in Education (NCME) Conference

2019-2020 Interview Panelist on Teaching and Mentorship for Bluhm Family Professorship in Education and Data Sciences faculty search at Harvard Graduate School of Education

Lab Membership

2020-Present HGSE Educational Data Science Lab. PI: Prof. Sebastian Munoz-Najar Galvez.

2017-Present Causality, Applications, and Research in Education and Statistics (C.A.R.E.S.) Lab. PI: Prof. Luke Miratrix.

2018-Present HGSE Educational Measurement Lab. PI: Prof. Andrew Ho.

2018-2022 Harvard Science Education Department Research Posse. Co-PIs: Dr. Phil Sadler and Dr. Gerhard Sonnert.