HARVARD
GRADUATE SCHOOL OF EDUCATION

Harvard University Graduate School of Education
Postdoctoral Position in
Developing statistical methods for supporting text analysis in RCTs

The Harvard University Graduate School of Education seeks to fill a postdoctoral fellowship on using text as an outcome in large scale field trials of education interventions. In order to really tackle policy and programming that can improve writing, we need to be able to measure writing quality more at scale. Currently, this kind of work involves large amounts of human coding effort. Our team (Dr. Miratrix at HGSE, Dr. Mozer at Bentley University, and Dr. Al-Adeimi at Michigan State University) is looking to relieve at least part of this coding effort using machine learning tools. As part of this we have developed some statistical methods and data analytic pipelines that incorporate human coding effort in a manner that protects the analysis from potential drift from the reductionist aspects of many machine learning tools.

There are a few different potential directions for this one-year postdoctoral fellowship: build out a software package that implements the methods we are developing (in R), conduct evaluations of these tools using novel datasets, develop some extensions to the core statistical approach for contexts such as cluster-randomized or multisite randomized trials. Regardless, the work will be a mix of statistical programming, quantitative data analysis with state-of-the-art text analysis tools, reviewing the literature to assess tools we might leverage for our aims, and writing of results in the form of academic papers as well as tutorials and other materials to maximize the impact of the work.

Candidates must have an earned doctoral degree in an appropriate discipline prior to starting the appointment. The successful applicant will have a demonstrated ability to engage with quantitative research with some background in text analysis. The responsibilities of the position include working as part of a collaborative team at the Harvard Graduate School of Education, developing a literature review and exploring new tools for text analysis, investigating the use of generative AI such as Chat GPT for augmenting human scoring, and disseminating results of the research. As part of your postdoctoral fellowship, you will receive mentorship and training in a number of areas. Your orientation will include an overview of all related research being conducted by the team of researchers leading the project. Career counseling will be provided, as will guidance on the preparation of manuscripts, conference presentations, and grant proposals.

Questions about the position can be directed to Dr. Luke Miratrix (https://cares.gse.harvard.edu/; lmiratrix@g.harvard.edu). Harvard recognizes the value of having a diverse staff at all levels of the organization and we encourage applications from candidates of all backgrounds and identities, including from groups that are underrepresented in academia.

Essential attributes for this position: formal academic credentials, a background in quantitative social science of some form, and proficiency with statistical programming and analysis in R. Desirable attributes for this position: formal academic credentials in statistics/biostatistics or related quantitative field, or in a quantitative social science of some description, experience with statistical analysis of text data, and an ability to clearly write in an accessible, clear, yet academic manner.

One of the best parts about HGSE is its vibrant, close-knit community. According to Harvard University regulations, employees must work in a state in which Harvard is registered to do business (https://oc.finance.harvard.edu/employees-working-outside-of-massachusetts).

The appointment will begin as soon as possible. Application review will begin on April 20th, 2023 and will continue until the position is filled. Prospective applicants should submit a CV and letter of interest online at http://apply.interfolio.com/123767.

For information about the Harvard Graduate School of Education, please visit our web site: www.gse.harvard.edu.

We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.