Jacob Jameson

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Education

Harvard University — Cambridge, MA
Ph.D. in Health Policy / Decision Sciences, Secondary Field in Computational Science — *Aug. 2022 – Present*

The University of Chicago — Chicago, IL
Master of Science in Computational Analysis and Public Policy — *Sep. 2020 – Jun. 2022*

The Johns Hopkins School of Education — Baltimore, MD
Teaching Certification in Secondary Mathematics and Secondary Computer Science — *Aug. 2018 – Dec. 2019*

The University of California at Santa Cruz — Santa Cruz, CA
Bachelor of Arts in Economics and Mathematics — *Sep. 2015 – Jun. 2018*

Research Experience

Researcher — Cambridge, MA
The Public Impact Analytics Science Lab (PIAS-Lab) at Harvard University — *Sep. 2022 – Present*

Research Analyst — Chicago, IL
Center for Health and the Social Sciences at The University of Chicago — *Nov. 2020 – Aug. 2022*

Research Assistant — Chicago, IL
Department of Public Health Sciences at The University of Chicago — *May. 2021 – Aug. 2022*

Data Analyst — Chicago, IL
The Law School at The University of Chicago — *May. 2021 – Aug. 2021*

Publications

[1] Soo, Jackie; **Jameson, Jacob**; Flores, Andrea; Dubin, Lisa; Perish, Emily; Afzal, Azka; Berry, Grace; DiMaggio, Vinny; Krishnamoorthi, Ram; Porter, Justin; Tang, Joyce; Meltzer, David. Does the Doctor–Patient Relationship Affect Enrollment in Clinical Research?. *Academic Medicine* ():e005195, February 22, 2023. — DOI: 10.1097/ACM.0000000000005195

[2] Glasser, Nathaniel J.; **Jameson, Jacob**; Pollack, Harold A.; Tung, Elizabeth; and Lindau, Stacy Tessler. "Masculinity and Toxins: Exploring Connections between Adolescent Male Gender Expression, School Social Networks and Gender Norms, and Adult Substance Use." *Under Review.*

[3] **Jameson, Jacob**; Feizi, Arshya; and Saghafian, Soroush. "To Batch or Not to Batch: Sequential vs. Batched Testing Strategies in the ED." *In Preparation.*

[4] Glasser, Nathaniel J.; **Jameson, Jacob**; and Pollack, Harold A. "The Way to a Man's Heart (Disease): Exploring Connections between Male Adherence with Gendered Behavior and Cardiovascular Disease Risk." *In Preparation.*

[5] Glasser, Nathaniel J.; **Jameson, Jacob**; Winslow, Victoria; Abramsohn, Emily M.; Jagaid, Jyotsna S.; and Lindau, Stacy Tessler. "Impact of experiences of discrimination on self-efficacy among parents and other primary caregivers of hospitalized children." *In Preparation.*

[6] Saulsberry, Loren; **Jameson, Jacob**; Danahey, Keith; Dolan, M. Eileen; Gollust, Sarah E.; Gibbons, Robert D.; and O'Donnell, Peter H. "Underrepresented Racial and Ethnic Populations Have Lower Odds of Exposure to Medications with Evidence-Based Pharmacogenomic Associations." *In Preparation.*

[7] Zhang, Hui; Meltzer, David O.; Flores, Andrea; and **Jameson, Jacob**. "Assessing Utilization Patient Impact of the Comprehensive Care Physician Model Using BCBS Claims Data." *In Preparation.*

Grants and Funding

Howard Raiffa Fund — 2022-2023
- Amount $6,500
- Administered by Harvard University Center for Health Decision Sciences to support research in Decision Sciences

Professional Societies

Institute for Operations Research and the Management Sciences (INFORMS)
- Health Applications Society Student Liaison (2022-2023)

Society for Medical Decision Making (SMDM)

Technical Skills

Languages: R, Python, Stata, SQL, SAS, JavaScript, HTML/CSS, Java
Frameworks: Spark, React, AWS, Flask, Django, D3
Developer Tools: Git, Docker, Visual Studio

Presentations

INFORMS Healthcare 2023 Toronto, ON, CAN
To Batch or not To Batch? Optimizing Diagnostic Testing Strategies in the ED *Forthcoming Jul. 2023*
- Session Chair in Health Policy Cluster

INFORMS Annual Meeting 2023 Phoenix, AZ
To Batch or not To Batch? Optimizing Diagnostic Testing Strategies in the ED *Forthcoming Oct. 2023*
- Session Chair in MSOM Healthcare Cluster

Teaching

Harvard T.H. Chan School of Public Health
- Decision Science for Public Health. Teaching Fellow (2023)

Harvard Kennedy School of Government
- Game Theory. Teaching Fellow (2023)
- Big Data and Machine Learning. Course Assistant (2023)
- Data and Programming for Policymakers. Teaching Fellow (2023)
- Resources, Incentives, and Choices I: Markets and Market Failures. Teaching Fellow (2022)

The University of Chicago, Center for Translational Science
- Data, Quantitative Methods, and Applications in HSR. Teaching Assistant and Instructor (2021, 2022)
- Introduction to Health Services Research. Teaching Assistant (2021)

The University of Chicago, Department of Computer Science
- Machine Learning for Public Policy. Teaching Assistant (2022)
- Mathematics for Data Analysis and Computer Science. Teaching Assistant (2022)

The University of Chicago Booth School of Business
- Introductory Finance. Teaching Assistant (2020-2022)
- Data Analysis in R and Python. Teaching Assistant (2021)

The University of Chicago Harris School of Public Policy
- Coding Lab for Public Policy. Instructor and Curriculum Developer (2021)

Teach For America, Achievement First Amistad Academy Middle School
- 7th/8th Grade Mathematics. Mathematics Teacher (2018-2020)

Center for Health Decision Science
https://chds.hsph.harvard.edu

March 17, 2023

The University of Chicago Booth School of Business
5807 S. Woodlawn Ave.
Chicago, IL 60637 USA

Subject: Machine Learning in Economics Summer Institute Interest Statment

Dear MLESI Organizers,

I am writing to apply for the Machine Learning in Economics Summer Institute (MLESI) at the University of Chicago. As a Ph.D. student in Health Policy and Decision Sciences at Harvard University, I have a strong interest in the application of machine learning methods in healthcare operations research and medical decision-making. My academic background, which blends mathematics, computer science, and economics, positions me well to ask and answer policy-relevant questions that require applying advanced computational and statistical methods. I intend to use my training from MLESI to develop strong methodologies that I can use to model and solve dire healthcare decision problems.

My initial exposure to machine learning and advanced economics was, coincidentally, while I was a master's student at The University of Chicago. I completed my M.S. in Computational Analysis and Public Policy and was fortunate enough to work with faculty such as David Meltzer and Dan Adelman, who inspired me to pursue research at the intersection of economics, health policy, and operations research. During my time at UChicago, I was also able to TA advanced machine learning courses under Chenhao Tan. The faculty and opportunities I had access to at UChicago were fundamental in getting me to where I am now. I am eager to return and continue learning advanced methods to incorporate into my research.

My current research incorporates methods from machine learning and causal inference to address critical healthcare operations and policy questions. My most recent project, which I will present at INFORMS Healthcare this summer, uses emergency department operational data to create a framework for when physicians should be batch-ordering diagnostic tests versus sequentially ordering tests. I became interested in this issue while working with Dan Adelman on his project on operating room teams. Working with UChicago Medicine to pilot Professor Adelman's OR team scheduler tool inspired me to consider other ways to improve hospital efficiency, generating benefits for both patients and providers. I firmly believe that machine learning applications have the potential to improve healthcare and economic outcomes significantly.

Since beginning my Ph.D. at Harvard, I have been fortunate enough to work with Dr. Soroush Saghafian in the Public Impact Analytics Science Lab. The goal of our lab is to advance and apply the science

of analytics to solve societal problems. We have recently begun working in collaboration with the Dana Farber Cancer Institute. We are developing machine learning algorithms that integrate biomarkers and clinical data to predict immune resistance to specific cancer treatments. This work aims to use these predictions in a simulation model that will allow us to decide the best course of action for a patient with untreated melanoma.

I am excited to participate in MLESI as it provides a unique opportunity to enhance my knowledge of machine learning methods and apply them to critical economic questions. I believe that it is a strength that I am still in the first year of my Ph.D. program and that participating in MLESI early in my program will allow me to make the most effective use of what I learn in my dissertation.

My academic and research experience, coupled with my deep interest in applying machine learning in policy-relevant research, make me a strong candidate for the MLESI program. I look forward to participating in the program and contributing to its discussions and activities.

Thank you for considering my application.

Sincerely,

Jacob Jameson