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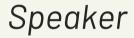CLASS Advanced Methods School

Keynote Speech

AI, MACHINE LEARNING, AND THE IMPACT ON SOCIAL SCIENCE RESEARCH

Speaker
Professor Jeff Gill

Distinguished Professor
Department of Government
Department of Mathematics & Statistics
American University

13 JUN 2024 (THU)

03:00 PM - 04:30 PM (HKT)

G7603 YEUNG CITYU

@ Enquiry: chpgrd@cityu.edu.hk

➤ Registration: https://bit.ly/cams20240613a

AI, MACHINE LEARNING, AND THE IMPACT ON SOCIAL SCIENCE RESEARCH

Abstract

There has never been a time when machines have affected human life like the current era. Almost every facet of individuals and society are affected by data collection, data analysis, machine learning, and artificial intelligence. This talk is about specific AI tools, data collection in the 21st century, and how social science researchers can maximally take advantage of the wide array of modern tools. This includes an overview of current methods and technology used for collecting, protecting, aggregating, processing, representing, and interpreting data, how policymakers can use data tools (such as open source, geospatial, and in-situ information), and basic ethical standards behind data collection and use.

Speaker Bio

Jeff Gill (PhD in Statistics and Government, American University) is Distinguished Professor in the Department of Government and also in the Department of Mathematics & Statistics, and the Founding Director of the Center for Data Science. He co-directs the Masters in Data Science at AU. Gill previously taught at Washington University and Harvard University. He has done extensive work in the development of Bayesian hierarchical models, nonparametric Bayesian models, elicited prior development from expert interviews, as well in fundamental issues in statistical inference. He has extensive expertise in statistical computing, Markov chain Monte Carlo (MCMC) tools in particular. Current theoretical develops new hybrid algorithms for statistical estimation with multilevel specifications and complex time-series and spatial relationships, as well clustering detection within algorithms and machine learning. Current applied work includes: blood and circulation physiology including how our bodies change these dynamics in times of stress such as injury, long-term mental health outcomes from children's exposure to war, pediatric head trauma, analysis of events data, survey research methodologies, and spatial analysis of social and biomedical conditions.