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## WHEN SOCIAL SCIENCE MEETS COMPUTER SCIENCE...

Webinar of Computational Social Science Laboratory (CSSL@CUHK)

# The Silicon Gaze: A Typology of Biases and Inequality in LLMs Through the Lens of Place

12 February 2026 (Thursday), 10:00 - 11:30 (UTC+8, HKT)

### Abstract

This paper introduces the concept of the silicon gaze to explain how large language models (LLMs) reproduce and amplify long-standing spatial inequalities. Drawing on a 20.3-million-query audit of ChatGPT, we map systematic biases in the model's representations of countries, states, cities and neighbourhoods. From these empirics, we argue that bias is not a correctable anomaly but an intrinsic feature of generative AI, rooted in historically uneven data ecologies and design choices. Building on a power-aware, relational approach, we develop a five-part typology of bias (availability, pattern, averaging, trope and proxy) that accounts for the complex ways in which LLMs privilege certain places while rendering others invisible.



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### Biography

Matthew Zook is Professor of Digital Geography at the University of Kentucky and Editor in Chief of the Big Data and Society (Sage). His research examines the spatial implications of digital technologies, focusing on data, algorithmic systems, and the political economy shaping contemporary urban and economic geographies.



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