

Online Seminar on Undergraduate Mathematics Education

critstats: Reimagining introductory statistics using a critical quantitative approach Nathan Alexander, Howard University

I describe a modern approach to teaching introductory statistics that leverages logic, theory, and computational methods to engage students in critical quantitative analysis. I explore how integrating open-source software tools into this curriculum enables learners to participate in an interdisciplinary process of knowledge construction: defining terms and propositions and applying statistical concepts to social issues. This approach can strengthen both technical proficiency and critical thinking. I then discuss the structure of a related package, critstats, which informs a community model and framework for developing informational data systems through which users can examine niche histories, issues, and challenges.



Noon ET, December 1, 2026

Zoom link: <https://cornell.zoom.us/j/92415199317>, passcode olsume

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