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The Logos, Ethos, and Pathos of Data Storytelling

In a world saturated with data and methodological research, the ability to communicate statistical insights clearly and compellingly is as critical as the models we build and the methods we develop. This talk explores the art and science of data storytelling through the three rhetorical lenses of Logos (logic and reason), Ethos (credibility and character), and Pathos (emotion and connection) as first articulated by Aristotle in his treatise Rhetoric. For practicing statisticians and data scientists, mastering these elements transforms technical findings into narratives that influence decisions, inform policy, and inspire change. For methodological researchers, ethos, pathos, and logos can enhance research storytelling as well. With transparent, clear and concise communication rooted in neuroscience, practitioners are more likely to recall and select state of the art methods presented by researchers. In this way, researchers influence data centric decisions, inform analysis-driven policy, and inspire effective change.

Each rhetorical pillar will be defined in the context of scientific, data-based communication. Together, we will explore how our discipline engrains thought patterns that work against effective use of the three pillars. Attendees will be introduced to story structures and frameworks that simplify the communication of real-world, data-centric work. The talk will include practical tips and tricks such as how to explain uncertainty in an understandable way, how to tailor a narrative to diverse audiences, and how to avoid common storytelling pitfalls like misaligned visuals or cognitive overload. Each tip or framework will be accompanied by examples, resulting in future statistics and data science stories that are not only technically sound but also rhetorically powerful.

Special/ Invited session

Classification

Both methodology and application

Keywords

Data Storytelling, Scientific Communication, Rhetoric in Statistics

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