Abstract Submitted
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Quantifying falsifiability of scientific theories ILYA NEMENMAN, Emory University — I argue that the notion of falsifiability, a key concept in defining a valid scientific theory, can be quantified using Bayesian Model Selection, which is a standard tool in modern statistics. This relates falsifiability to the quantitative version of the statistical Occam's razor, and allows transforming some long-running arguments about validity of scientific theories from philosophical discussions to rigorous mathematical calculations.

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