

Properties and Uses of the Entropy Score.

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Abstract. The entropy score $-\log p$, where p is the forecast probability for the observed outcome, has a number of convenient properties. It is easy to calculate and record, can be used to compare different forecasting schemes or models, is closely related to likelihoods, entropies, and probability gains, and has some convenient theoretical properties.

In this paper we summarize its definition and main properties, compute its expected value for a graduated sequence of renewal-type models, describe its links to Molchan's sigma-tau diagram, and outline some applications to earthquake forecasting.