

The Laplace-Jaynes approach to induction

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Abstract

An approach to induction is presented, based on the idea of analysing the context of a given problem into 'circumstances'. This approach, fully Bayesian in form and meaning, provides a complement or in some cases an alternative to that based on de Finetti's representation theorem and on the notion of infinite exchangeability. In particular, it gives an alternative interpretation of those formulae that apparently involve 'unknown probabilities' or 'propensities'. Various advantages and applications of the presented approach are discussed, especially in comparison to that based on exchangeability. Generalisations are also discussed.

Keywords: induction, probability theory, de Finetti's theorem, exchangeability

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