Mathematics > Statistics Theory

Adaptive Bayes test for monotonicity

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We study the asymptotic behaviour of a Bayesian nonparametric test of qualitative hypotheses. More precisely, we focus on the problem of testing monotonicity of a regression function. Even if some results are known in the frequentist framework, no Bayesian testing procedure has been proposed, at least none has been studied theoretically. This paper propose a procedure that is straightforward to implement, which is a great advantage compared to those proposed in the literature. We describe theoretical properties of this procedure and illustrate its behaviour using a simulation study and real data analysis.

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