Insalate di Matematica
presents

The importance of being Bayesian

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U5 - Room 3014 and
Webex meeting

Università di Milano Bicocca

BY SPARKER

Abstract

Although probability theory is a well-established branch of mathematics, the question of how we should interpret probabilities is still controversial. It is not just a philosophical question, since different interpretations of probability lead to different approaches to statistical inference. We will focus on the subjective interpretation, which considers probability as a degree of subjective belief. Bayesian statistics is based on this framework, as data are used to update our prior beliefs. I will show the main features of Bayesian statistics, and highlight the differences with the frequentist approach. Then, I will present some benefits and limitations of the Bayesian approach, in particular in a machine learning framework.

Keywords:

Bayesian inference · probabilistic modeling · sampling algorithms

"Obvious" is the most dangerous word in mathematics. - Eric Temple Bell

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