Applied Bayesian Statistics

Abstract

The Bayesian approach to statistical inference originated in the 1700 with the work of the little-known Presbyterian minister Thomas Bayes and of the famous French mathematician Pierre-Simon Laplace. After being abandoned and rediscovered several times, it is now experiencing a time of great and growing popularity -- and not only among statisticians. The strengths of Bayesian statistics are on one hand the ability to combine the information provided by the data with prior knowledge, and on the other the availability of simulation-based algorithms that allow to fit very complicated models to complex data set.

In this introductory talk I will survey the basic principles underlying Bayesian statistics and illustrate some applications to a range of real-life problems.