INFERENTIAL DISTRIBUTIONS FOR NON-BAYESIAN PREDICTIVE FIT

HISATAKA KUBOKI

Department of Communications and Systems, The University of Electro-Communications, 1-5-1 Chofugaoka, Chofu, Tokyo 182, Japan

(Received June 28, 1991; revised April 7, 1992)

Abstract. This article proposes a non-Bayesian procedure for constructing inferential distributions which can be used for producing predictive distributions. The concepts of bootstrap and of predictive likelihood are employed for developing the method. A result is obtained for exponential families, and the Bayesian prediction based on Jeffreys' prior is newly justified.

Key words and phrases: Bootstrap, estimative fit, exponential family, inferential distribution, Jeffreys' prior, predictive distribution, predictive fit, predictive likelihood.