Elements of Computational Statistics

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Abstract

In this mini course some topics of computational statistics will be covered. We will introduce programming concepts in Ox, a matrix programming language, and in R. We will also present some important algorithms that are commonly used in scientific computation. The Monte Carlo method will be introduced and discussed. It will be used to evaluate the performance of the pontual and interval estimators and also to the integrals evaluation. Finally, the bootstrap sampling method will be presented with application to the bias correction for estimators, to the obtaining of confidence intervals, and to the conducting of hypothesis test.