CHAPTER 3 ALGORITHMS IN STATISTICS

ALGORITHMS USED IN STATISTICS

Algorithms of numerical analysis
- numerical integration of function
- resolution of algebraic equations
- linear algebra,
- function optimization

Permutation tests and the bootstrap method : pseudo-random numbers
Rank-based non-parametric methods : sorting

3.1. Computation of variances and covariances

3.2. Probabilities and quantiles

3.3. Generation of pseudo-random numbers and variables

3.4. Monte Carlo method

3.5. Multiple linear regression

3.6 Introduction to non-linear regression

3.7 Resampling and the bootstrap method

3.8 Complements and case studies

References

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