

A concise guide to statistics

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20419166&lokasi=lokal>

Abstrak

The text gives a concise introduction into fundamental concepts in statistics. Chapter 1 : Short exposition of probability theory, using generic examples. Chapter 2 : Estimation in theory and practice, using biologically motivated examples. Maximum-likelihood estimation is covered, including Fisher information and power computations. Methods for calculating confidence intervals and robust alternatives to standard estimators are given. Chapter 3 : Hypothesis testing with emphasis on concepts, particularly type-I , type-II errors, and interpreting test results. Several examples are provided. T-tests are used throughout, followed by important other tests and robust/nonparametric alternatives. Multiple testing is discussed in more depth, and combination of independent tests is explained. Chapter 4 : Linear regression, with computations solely based on R. Multiple group comparisons with ANOVA are covered together with linear contrasts, again using R for computations.