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Nota di contenuto	LISP-STAT An Object-Oriented Environment for Statistical Computing and Dynamic Graphics; Contents; Preface; 1 Introduction; 1.1 Environments for Statisticd Computing; 1.2 The Lisp-Stat Environment; 1.2.1 Why Lisp?; 1.2.2 Using Lisp-stat; 1.2.3 Some Design and Portability Issues; 1.2.4 The Future of Lisp-Stat; 2 A Lisp-stat Tutorial; 2.1 The Lisp Interpreter; 2.2 Elementary Computations and Graphs; 2.2.1 One-Dimensional Summaries and Plots; 2.2.2 Two-Dimensional Plots; 2.2.3 Plotting Functions; 2.3 More on the Interpreter; 2.3.1 Saving Your Work; 2.3.2 A Command History Mechanism 2.3.3 Getting Help2.3.4 Listing and Undefining Variables; 2.3.5 Interrupting a Calculation; 2.4 Some Data-Handling Functions; 2.4.1 Generating Systematic Data; 2.4.2 Generating Random Data; 2 4.3 Forming Subsets and Deleting Cases; 2.4.4 Combining Several Lists; 2.4.5 Modifying Data; 2.4.6 Reading Data Files; 2.5 Dynamic Graphs; 2.5.1 Spinning Plots; 2.5.2 Scatterplot Matrices; 2.5.3 Interacting with Individual Plots; 2.5.4 Linked Plots; 2.5.5 Modifying a Scatterplot; 2.5.6 Dynamic Simulations; 2.6 Regression; 2.7 Defining Functions and

Methods; 2.7.1 Defining Functions
2.7.2 Functions as Arguments2.7.3 Graphical Animation Control; 2.7.4 Defining Methods; 2.8 More Models and Techniques; 2.8.1 Nonlinear Regression; 2.8.2 Maximization and Maximum Likelihood Estimation; 2.8.3 Approximate Bayesian Computations; 3 Programming in Lisp; 3.1 Writing Simple Functions; 3.2 Predicates and Logical Expressions; 3.3 Conditional Evaluation; 3.4 Iteration and Recursion; 3.5 Environments; 3.5.1 Some Terminology; 3.5.2 Local Variables; 3.5.3 Local Functions; 3.6 Functions and Expressions as Data; 3.6.1 Anonymous Functions; 3.6.2 Using Function Arguments
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5.4.1 Basic Matrix and Array Functions

Sommario/riassunto

Written for the professional statistician or graduate statistics student, the primary objective of this book is to describe a system, based on the LISP language, for statistical computing and dynamic graphics to show how it can be used as an effective platform for a wide range of statistical computing tasks ranging from basic calculations to customizing dynamic graphs. In addition, it introduces object-oriented programming and graphics programming in a statistical context. The discussion of these ideas is based on the Lisp-Stat system; readers with access to such a system can reproduce the exa