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   Nota di contenuto   Cover; Copyright; Credits; About the Authors; About the Reviewers; www.PacktPub.com; Table of Contents; Preface; Chapter 1: Understanding R's Performance - Why Are R Programs Sometimes Slow?; Three constraints on computing performance - CPU, RAM, and disk I/O; R is interpreted on the fly; R is single-threaded; R requires all data to be loaded into memory; Algorithm design affects time and space complexity; Summary; Chapter 2: Profiling - Measuring Code's Performance; Measuring the total execution time; Measuring execution time with system.time(); Repeating time measurements with rbenchmark
                        Measuring distribution of execution time with microbenchmarkProfiling the execution time; Profiling a function with Rprof(); The profiling results; Profiling the memory utilization; Monitoring memory utilization, CPU utilization, and disk I/O using OS tools; Identifying and resolving bottlenecks; Summary; Chapter 3: Simple Tweaks to Make R Run Faster; Vectorization; Use of built-in functions; Preallocating memory; Use of simpler data structures; Use of hash tables for frequent lookups on large data; Seek fast alternative packages in CRAN; Summary
                        Chapter 4: Using Compiled Code for Greater SpeedCompiling R code before execution; Compiling functions; Just-in-time (JIT) compilation of R code; Using compiled languages in R; Prerequisites; Including

Sommario/riassunto	This book is for programmers and developers who want to improve the performance of their R programs by making them run faster with large data sets or who are trying to solve a pesky performance problem.