

Statistical Practice for Data Science

With Hands-On Illustrations Using R

Statistical Practice for Data Science: with Hands-on Illustrations using R is a comprehensive guide designed to equip students from diverse fields—engineering, science, and the biological, physical, and social sciences—with the statistical tools and techniques essential for data science. This book bridges the gap between theoretical concepts and practical applications, offering a clear and accessible introduction to statistics with minimal mathematical prerequisites. With a focus on real-world datasets and hands-on implementation using R, it empowers students to analyze, interpret, and communicate data effectively. The book begins with foundational concepts in probability and statistics, ensuring that students with only college-level algebra can grasp the material. It progresses through key topics such as data visualization, hypothesis testing, regression modeling, and modern machine learning methods like random forests and gradient boosting. Each chapter is enriched with practical examples and coding exercises in R, making it an invaluable resource for students embarking on a data science program. Designed as a one-semester course, the book provides flexibility for instructors to tailor the content to their curriculum. Whether exploring generalized linear models, mixed-effects models, or dependent data analysis, students will gain a deep understanding of statistical methods and their applications across various domains. By the end of the book, readers will be equipped to make informed decisions, quantify uncertainty, and communicate their findings effectively. This book is not just a learning tool—it's a practical companion for aspiring data scientists seeking to master statistical practice and R programming.

Statistical Practice for Data Science: with Hands-on Illustrations using R is a comprehensive guide designed to equip students from diverse fields—Engineering, Science, and Social Sciences—with the statistical tools and techniques essential for data science. This book bridges the gap between theoretical concepts and practical applications, offering a clear and accessible introduction to statistics with minimal mathematical prerequisites. With a focus on real-world datasets and hands-on implementation using R, it empowers students to analyze, interpret, and communicate data effectively. The book begins with foundational concepts in probability and statistics, ensuring that students with only college-level algebra can grasp the material. It progresses through key topics such as data visualization, hypothesis testing, regression modeling, and modern machine learning methods like random forests and gradient boosting. Each chapter is enriched with practical examples and coding exercises in R, making it an invaluable resource for students embarking on a data science program. Designed as a one-semester course, the book provides flexibility for instructors to tailor the content to their curriculum. Whether exploring generalized linear models, mixed-effects models, or dependent data analysis, students will gain a deep understanding of statistical methods and their applications across various domains. By the end of the book, readers will be equipped to make informed decisions, quantify uncertainty, and communicate their findings effectively. This book is not just a learning tool—it's a practical companion for aspiring data scientists seeking to master statistical practice and R programming.



65,50 €
65,50 € (zzgl. MwSt.)

*vorbestellbar, Erscheinungstermin ca.
August 2026*

Artikelnummer: 9780367698744
Medium: Buch
ISBN: 978-0-367-69874-4
Verlag: Taylor & Francis Ltd
Erscheinungstermin: 17.08.2026
Sprache(n): Englisch
Auflage: 1. Auflage 2026
Produktform: Kartoniert
Gewicht: 520 g
Seiten: 282
Format (B x H): 156 x 234 mm

