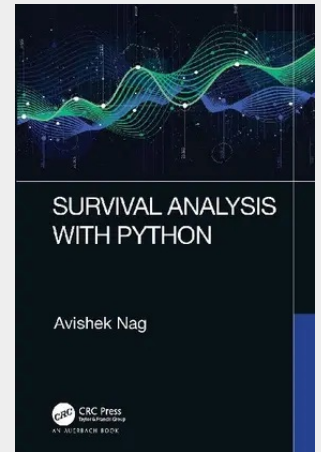


Survival Analysis with Python

Survival analysis uses statistics to calculate time to failure. Survival Analysis with Python takes a fresh look at this complex subject by explaining how to use the Python programming language to perform this type of analysis. As the subject itself is very mathematical and full of expressions and formulations, the book provides detailed explanations and examines practical implications. The book begins with an overview of the concepts underpinning statistical survival analysis. It then delves into - Parametric models with coverage of - Concept of maximum likelihood estimate (MLE) of a probability distribution parameter - MLE of the survival function - Common probability distributions and their analysis - Analysis of exponential distribution as a survival function - Analysis of Weibull distribution as a survival function - Derivation of Gumbel distribution as a survival function from Weibull - Non-parametric models including - Kaplan–Meier (KM) estimator, a derivation of expression using MLE - Fitting KM estimator with an example dataset, Python code and plotting curves - Greenwood's formula and its derivation - Models with covariates explaining - The concept of time shift and the accelerated failure time (AFT) model - Weibull-AFT model and derivation of parameters by MLE - Proportional Hazard (PH) model - Cox-PH model and Breslow's method - Significance of covariates - Selection of covariates The Python lifelines library is used for coding examples. By mapping theory to practical examples featuring datasets, this book is a hands-on tutorial as well as a handy reference.



30,60 €

30,60 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781032073675

Medium: Buch

ISBN: 978-1-032-07367-5

Verlag: Auerbach Publications

Erscheinungstermin: 08.10.2024

Sprache(n): Englisch

Auflage: 1. Auflage 2024

Produktform: Kartoniert

Gewicht: 150 g

Seiten: 94

Format (B x H): 152 x 229 mm

