

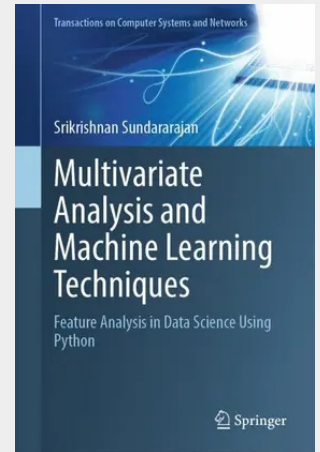
Multivariate Analysis and Machine Learning Techniques

Feature Analysis in Data Science Using Python

This book offers a comprehensive first-level introduction to data analytics. The book covers multivariate analysis, AI / ML, and other computational techniques for solving data analytics problems using Python. The topics covered include (a) a working introduction to programming with Python for data analytics, (b) an overview of statistical techniques – probability and statistics, hypothesis testing, correlation and regression, factor analysis, classification (logistic regression, linear discriminant analysis, decision tree, support vector machines, and other methods), various clustering techniques, and survival analysis, (c) introduction to general computational techniques such as market basket analysis, and social network analysis, and (d) machine learning and deep learning. Many academic textbooks are available for teaching statistical applications using R, SAS, and SPSS. However, there is a dearth of textbooks that provide a comprehensive introduction to the emerging and powerful Python ecosystem, which is pervasive in data science and machine learning applications.

The book offers a judicious mix of theory and practice, reinforced by over 100 tutorials coded in the Python programming language. The book provides worked-out examples that conceptualize real-world problems using data curated from public domain datasets. It is designed to benefit any data science aspirant, who has a basic (higher secondary school level) understanding of programming and statistics. The book may be used by analytics students for courses on statistics, multivariate analysis, machine learning, deep learning, data mining, and business analytics. It can be also used as a reference book by data analytics professionals.

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