

1. Record Nr.	UNINA9910983081503321
Autore	Lederer Johannes
Titolo	A First Course in Statistical Learning : With Data Examples and Python Code // by Johannes Lederer
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031302763 3031302761
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (298 pages)
Collana	Statistics and Computing, , 2197-1706
Disciplina	006.31
Soggetti	Machine learning Statistics - Computer programs Statistics Artificial intelligence - Data processing Statistical Learning Machine Learning Statistical Software Statistical Theory and Methods Applied Statistics Data Science Estadística Aprenentatge automàtic Mineria de dades Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Data -- Chapter 1: Fundamentals of Data -- Chapter 2: Exploratory Data Analysis -- Chapter 3: Unsupervised Learning -- Part II: Inferential Data Analyses -- Chapter 4: Linear Regression -- Chapter 5: Logistic Regression -- Chapter 6: Regularization -- Part III: Machine Learning -- Chapter 7: Support-Vector Machines -- Chapter 8: Deep Learning.
Sommario/riassunto	This textbook introduces the fundamental concepts and methods of

statistical learning. It uses Python and provides a unique approach by blending theory, data examples, software code, and exercises from beginning to end for a profound yet practical introduction to statistical learning. The book consists of three parts: The first one presents data in the framework of probability theory, exploratory data analysis, and unsupervised learning. The second part on inferential data analysis covers linear and logistic regression and regularization. The last part studies machine learning with a focus on support-vector machines and deep learning. Each chapter is based on a dataset, which can be downloaded from the book's homepage. In addition, the book has the following features: A careful selection of topics ensures rapid progress. An opening question at the beginning of each chapter leads the reader through the topic. Expositions are rigorous yet based on elementary mathematics. More than two hundred exercises help digest the material. A crisp discussion section at the end of each chapter summarizes the key concepts and highlights practical implications. Numerous suggestions for further reading guide the reader in finding additional information. This book is for everyone who wants to understand and apply concepts and methods of statistical learning. Typical readers are graduate and advanced undergraduate students in data-intensive fields such as computer science, biology, psychology, business, and engineering, and graduates preparing for their job interviews.

---