1. Record Nr. UNINA9910483031303321

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Titolo	Model Selection and Error Estimation in a Nutshell / / by Luca Oneto
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-24359-1
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (135 pages)
Collana	Modeling and Optimization in Science and Technologies, , 2196-7334 ; ; 15
Disciplina	006.31
Soggetti	Computational intelligence Statistics Data mining Computational Intelligence Statistical Theory and Methods Data Mining and Knowledge Discovery
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- The “Five W” of MS & EE -- Preliminaries -- Resampling Methods -- Complexity-Based Methods -- Compression Bound -- Algorithmic Stability Theory -- PAC-Bayes Theory -- Dierential Privacy Theory -- Conclusions & Further Readings.
Sommario/riassunto	How can we select the best performing data-driven model? How can we rigorously estimate its generalization error? Statistical learning theory answers these questions by deriving non-asymptotic bounds on the generalization error of a model or, in other words, by upper bounding the true error of the learned model based just on quantities computed on the available data. However, for a long time, Statistical learning theory has been considered only an abstract theoretical framework, useful for inspiring new learning approaches, but with limited applicability to practical problems. The purpose of this book is to give an intelligible overview of the problems of model selection and error estimation, by focusing on the ideas behind the different statistical learning theory approaches and simplifying most of the technical aspects with the purpose of making them more accessible and usable

in practice. The book starts by presenting the seminal works of the 80’s and includes the most recent results. It discusses open problems and outlines future directions for research.