

1. Record Nr.	UNINA9910299270503321
Autore	Allison Lloyd
Titolo	Coding Ockham's Razor / / by Lloyd Allison
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-76433-0
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XIV, 175 p. 46 illus.)
Disciplina	005.73
Soggetti	Data structures (Computer science) Statistics Artificial intelligence Data Structures Statistics and Computing/Statistics Programs Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Introduction -- 2 Discrete -- 3 Integers -- 4 Continuous -- 5 Function-Models -- 6 Multivariate -- 7 Mixture Models -- 8 Function-Models 2 -- 9 Vectors -- 10 Linear Regression -- 11 Graphs -- 12 Bits and Pieces -- 13 An Implementation -- 14 Glossary.
Sommario/riassunto	This book explores inductive inference using the minimum message length (MML) principle, a Bayesian method which is a realisation of Ockham's Razor based on information theory. Accompanied by a library of software, the book can assist an applications programmer, student or researcher in the fields of data analysis and machine learning to write computer programs based upon this principle. MML inference has been around for 50 years and yet only one highly technical book has been written about the subject. The majority of research in the field has been backed by specialised one-off programs but this book includes a library of general MML-based software, in Java. The Java source code is available under the GNU GPL open-source license. The software library is documented using Javadoc which produces extensive cross referenced HTML manual pages. Every probability distribution and statistical model that is described in the book is implemented and

documented in the software library. The library may contain a component that directly solves a reader's inference problem, or contain components that can be put together to solve the problem, or provide a standard interface under which a new component can be written to solve the problem. This book will be of interest to application developers in the fields of machine learning and statistics as well as academics, postdocs, programmers and data scientists. It could also be used by third year or fourth year undergraduate or postgraduate students.
