



Book lists for machine learning

Online Books

1. **Advances in large margin classifiers**, B.Schoelkopf, and C.Schuermans, MIT Press, Cambridge, MA, 2000
2. **Convex Optimization**, Stephen Boyd and Lieven Vandenberghe Cambridge University Press, 2004
3. **Expert Systems and Probabilistic Network Models** , E. Castillo, J.M. Gutiérrez, and A.S. Hadi, Springer-Verlag, 1997, ISBN-10: 0387948589, ISBN-13: 978-0387948584, Spanish version available online
4. **Information Theory, Inference, and Learning Algorithms**, D. J.C. MacKay, Cambridge University Press, 2003, ISBN-13: 9780521642989.
5. **Introduction to Machine Learning, Draft of Incomplete Notes** , Nils J. Nilsson, 1996
6. **Learning to Learn**, Sebastian Thrun and Lorien Y. Pratt, Kluwer Academic Publishers, ISBN-10: 0792380479
7. **Bayesian Reasoning and Machine Learning (Draft)**, David Barber, 2010
8. **Machine Learning, Neural and Statistical Classification** , D. Michie, D.J. Spiegelhalter, C.C. Taylor (eds), 1994, ISBN-10: 013106360X, ISBN-13: 978-0131063600
9. **Markov Random Fields and Their Applications** , Ross Kindermann and J. Laurie Snell, 1980, AMS ISBN: 0-8218-3381-2
10. **Neural Nets** , Kevin Gurney.
11. **Probability Theory: the Logic of Science** , E. T. Jaynes, Cambridge University Press, 2003, ISBN-10: 0521592712, ISBN-13: 978-0521592710
12. **Recent Advances in Robot Learning**, Judy A. Franklin, Tom M. Mitchell, and Sebastian Thrun (Editors), Springer, 1996, ISBN-10: 0792397452
13. **Reinforcement Learning: An introduction** , Richard Sutton and Andrew Barto, MIT Press, 1998, ISBN-10: 0-262-19398-1, ISBN-13: 978-0-262-19398-6

Book Support Sites

1. **Advances in Kernel Methods - Support Vector Learning**, B.Schoelkopf, C.J.C. Burges and A.J. Smola, MIT Press, Cambridge, MA, 1999
2. **All of Statistics. A Concise Course in Statistical Inference**, Larry Wasserman, Springer 2004
3. **An Introduction to Computational Learning Theory**, Michael J. Kearns and Umesh V. Vazirani, MIT Press, 1994, ISBN-10: 0-262-11193-4, ISBN-13: 978-0-262-11193-5
4. **Bayesian Inference in Statistical Analysis**, George E. P. Box and George C. Tiao, Wiley, 1992, ISBN: 978-0-471-57428-6
5. **Bayesian methods for nonlinear classification and regression** , David Denison, Chris

- Holmes, Bani Mallick and Adrian Smith, Wiley, 2002, ISBN: 978-0-471-49036-4
6. **Bayesian Networks and Decision Graphs** , Finn V. Jensen, Springer-Verlag, 2001, ISBN:0387952594
 7. **Bayesian Theory** , José M. Bernardo and Adrian F. M. Smith, Wiley, 2000, ISBN: 978-0-471-49464-5
 8. **Bioinformatics: The Machine Learning Approach**, Pierre Baldi and Søren Brunak, MIT Press, 1998, ISBN-10: 0-262-02442-X, ISBN-13: 978-0-262-02442-6
 9. **Causality: Models, reasoning and Inference**, Judea Pearl, Cambridge University Press, 2000, ISBN-10: 0521773628
 10. **Computational Intelligence: A Logical Approach** , David Poole, Alan Mackworth, Randy Goebel, Oxford University Press, New York 1998, ISBN: 0195102703
 11. **Computer Manual in MATLAB to accompany Pattern Classification, 2nd ed.** , David G. Stork and Elad Yom-Tov, John Wiley & Sons, 2004, ISBN: 0-471-42977-5
 12. **Data Mining: Concepts and Techniques, 2nd ed.** , Jiawei Han and Micheline Kamber, The Morgan Kaufmann Series in Data Management Systems, Jim Gray, Series Editor, Morgan Kaufmann Publishers, 2006, ISBN 1-55860-901-6
 13. **Data Mining: Practical Machine Learning Tools and Techniques (Second Edition)** , Ian H. Witten and Eibe Frank, Morgan Kaufmann, 2005, ISBN 0-12-088407-0
 14. **Elements of Information Theory, 2nd ed.** , Thomas M. Cover and Joy A. Thomas, Wiley, 2006, ISBN: 0-471-24195-4
 15. **Estimation of Dependences Based on Empirical Data**, V. Vapnik, Springer Verlag, 2006, 2nd edition, Hardcover ISBN: 978-0-387-30865-4
 16. **Gaussian Processes for Machine Learning** , Carl Edward Rasmussen and Christopher K. I. Williams, The MIT Press, 2006, ISBN 0-262-18253-X.
 17. **Introduction to Algorithms 2nd ed.**, Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, and Cliff Stein, MIT Press, 2001
 18. **Introduction to AI Robotics** , Robin Murphy, MIT Press, 2000, ISBN-10: 0-262-13383-0
 19. **Introduction to Graphical Modelling**, D Edwards, 2nd ed., Springer-Verlag 2000, New York, 333 pp. Hardcover ISBN 0-387-95054-0
 20. **Introduction to Machine Learning**, Ethem Alpaydin, The MIT Press, October 2004, ISBN 0-262-01211-1
 21. **Kernel Methods for Pattern Analysis**, J. Shawe-Taylor and N. Cristianini, Cambridge University Press, 2004, Hardback (ISBN-13: 9780521813976 | ISBN-10: 0521813972), Also available in eBook format
 22. **Latent Variable Models and factor Analysis, 2nd ed.** , David Bartholomew and Martin Knott, Hodder Arnold, 1999, Hardback, ISBN-10: 0340 69243X, ISBN-13: 978-0340692431
 23. **Learning in Graphical Models** , Michael I. Jordan, The MIT Press, Nov 1998, ISBN 0262600323
 24. **Learning Kernel Classifiers**, Ralf Herbrich, The MIT Press, 2002, ISBN: 0-262-08306-X
 25. **Learning with Kernels: Support Vector Machines, Regularization, Optimization and**

- Beyond** , Bernhard Schölkopf and Alexander J. Smola, The MIT Press, 2001, ISBN-10: 0262194759, ISBN-13: 978-0262194754
26. **Least Squares Support Vector Machines** , J. A. K. Suykens, T. Van Gestel, J. De Brabanter, B. De Moor, J. Vandewalle, World Scientific Pub. Co., Singapore, 2002, ISBN 981-238-151-1
 27. **Machine Learning** , Tom Mitchell, McGraw-Hill, 1997, ISBN: 0070428077
 28. **Monte Carlo Methods in Bayesian Computation** , Ming-Hui Chen, Qi-Man Shao, and Joseph G. Ibrahim, Springer-Verlag, 2000, ISBN 0-387-98935-8
 29. **Neural Networks for Pattern Recognition** , Christopher Bishop, Oxford University Press, 1996, ISBN 0-19-853849-9 Hardback, ISBN 0-19-853864-2 Paperback
 30. **Neurocomputing: Foundations of Research**, James Anderson and Edward Rosenfeld (eds), MIT Press, 1988, ISBN-10: 0-262-51048-0, ISBN-13: 978-0-262-51048-6
 31. **Pattern Classification, 2nd ed.** , Richard Duda, Peter Hart and David Stork , John Wiley & Sons, 2001, ISBN: 0-471-05669-3
 32. **Pattern Recognition and Machine Learning** , Christopher M. Bishop, Springer, 2006, ISBN: 978-0-387-31073-2
 33. **Pattern Recognition for Neural Networks** , Brian Ripley, Cambridge University Press, 2008, ISBN 978-0-521-71770-0.
 34. **Relational Data Mining**, Saso Dzeroski and Nada Lavrac (editors), Springer, Berlin, 2001, ISBN-10: 3540422897
 35. **Statistical Decision Theory and Bayesian Analysis**, James O Berger, Springer, 1985 2nd ed., Hardcover ISBN: 978-0-387-96098-2
 36. **Statistical Inference**, G. Casella and R. Berger, Duxbury, 2001
 37. **Support Vector Machines**, John Shawe-Taylor & Nello Cristianini - Cambridge University Press, 2000
 38. **Systems That Learn, 2nd Edition** , Sanjay Jain, Daniel Osherson, James S. Royer, Arun Sharma, MIT Press, 1999, ISBN 0-262-10077-0
 39. **The Elements of Statistical Learning: Data Mining, Inference, and Prediction**, Trevor Hastie, Robert Tibshirani, Jerome Friedman, Springer-Verlag 2001

Other Books

1. *Advances in Learning Theory: Methods, Models and Applications*, J.A.K. Suykens, G. Horvath, S. Basu, C. Micchelli, J. Vandewalle (Eds.), 2003, ISBN: 1 58603 341 7
2. *AI Application Programming*, M. Tim Jones, Charles River Media, 2005, ISBN: 1584504218
3. *Applied Evolutionary Algorithms in Java*, Robert Ghanea-Hercock, Springer, 2003, ISBN: 0387955682
4. *Artificial Intelligence*, Rob Callan, Palgrave Macmillan, 2003, ISBN: 0333801369
5. *Bayesian Learning in Neural Networks*, R. Neal, Springer-Verlag, 1996
6. *A Compendium of Machine Learning*, Terry Caelli and Garry Briscoe, Intellect Books,

1996, ISBN-10: 1567501796

7. *Computational Learning Theory and Natural Learning Systems, Vol. IV: Making Learning Systems Practical*, Russell Greiner, Thomas Petsche, Stephen Jose (Editors), The MIT Press, 1997, ISBN-10: 0262571188
8. *Construction and Assessment of Classification Rules*, David J. Hand, John Wiley and Sons, 1997, ISBN 0-471-96583-9
9. *Data Mining and Knowledge Discovery with Evolutionary Algorithms*, Alex A. Freitas, Springer, 2002, ISBN: 3-540-43331-7
10. *Elements of Machine Learning*, Pat Langley, Morgan Kaufmann, 1995, ISBN-10: 1558603018
11. *Evolutionary Algorithms for Single and Multicriteria Design Optimization*, Andrzej Osyczka, Physica-Verlag Heidelberg, 2001, ISBN-10: 3790814180
12. *Explanation-Based Neural Network Learning: A Lifelong Learning Approach*, Sebastian Thrun, Kluwer Academic Publishers, 1996, ISBN-10: 0792397169
13. *Feature Extraction, Construction and Selection: A Data Mining Perspective*, Huan Liu (Editor), Hiroshi Motoda (Editor), Springer, 1998, ISBN-10: 0792381963
14. *Foundations of Neural Networks, Fuzzy Systems and Knowledge Engineering*, Nikola K. Kasabov, The MIT Press, 1996, ISBN-10: 0262112124
15. *Genetic Algorithms in Search, Optimization, and Machine Learning*, David E. Goldberg, Addison-Wesley, 1989, ISBN-10: 0201157675
16. *Graphical models for machine learning and digital communication*, B. J. Frey, MIT Press, 1998
17. *Hidden Markov Models: Estimation and Control*, Robert J. Elliott, Lakhdar Aggoun and John B. Moore, Springer, 1995
18. *An Introduction To Genetic Algorithms*, Melanie Mitchell, MIT Press, 1998, 0-262-63185-7
19. *An Introduction to Kolmogorov Complexity and Its Applications*, Ming Li and Paul Vitanyi, Second Edition, Springer Verlag, 1997, ISBN 0-387-94868-6
20. *An Introduction to Latent Variable Models*, Brian S. Everitt, Chapman & Hall, 1984, ISBN-10: 0412253100, ISBN-13: 978-0412253102
21. *Introduction to Statistical Pattern Recognition, 2nd ed*, Keinosuke Fukunaga, Academic Press, 1990
22. *Learning in Neural Networks : Theoretical Foundations*, M. Anthony and P. Bartlett, Cambridge University Press, 1999
23. *Machine Learning: A Theoretical Approach*, Balas K. Natarajan, Morgan Kaufmann, 1991, ISBN-10: 1558601481
24. *Machine Learning and Data Mining: Methods and Applications*, Ryszard S. Michalski (Editor), Ivan Bratko (Editor), Miroslav Kubat (Editor), John Wiley & Sons, 1998, ISBN-10: 0471971995
25. *Machine Learning and Image Interpretation*, Terry Caelli, Walter F. Bischof, Springer,

1997, ISBN-10: 030645761X

26. *Machine Learning Methods for Planning*, Steven Minton, Morgan Kaufmann, 1993, ISBN-10: 1558602488
27. *The Mathematics of Generalization*, David H. Wolpert, Addison Wesley Longman, 1995, ISBN-10: 0201409852
28. *Multidimensional Scaling, 2nd ed*, T.F. Cox and M. A. A. Cox, Chapman and Hall, 2000.
29. *The Nature of Statistical Learning Theory*, V.N. Vapnik, second ed. Springer Verlag, 1999
30. *Nonlinear Programming*, O. L. Mangasarian, SIAM, 1994
31. *Practical methods of Optimization*, R. Fletcher, Wiley, 1988
32. *Probabilistic Networks and Expert Systems*. Robert G. Cowell, Steffen L. Lauritzen and David J. Spiegelhater, Springer, 2005, Language: English, ISBN-10: 0387987673, ISBN-13: 978-0387987675
33. *Probabilistic Reasoning in Intelligent Systems: Networks of Plausible Inference*, Judea Pearl, Morgan Kaufmann, 1988, ISBN-10: 1558604790
34. *Readings in Machine Learning*, Jude Shavlik (Editor), Thomas Dietterich (Editor), Morgan Kaufmann, 1990, ISBN-10: 1558601430
35. *Reasoning about Uncertainty*, Joseph Y. Halpern, The MIT Press, 2005, ISBN-10: 0262582597
36. *Recent Advances in Reinforcement Learning*, Leslie Pack Kaelbling (Editor), Kluwer Academic Publishers, 1996, ISBN-10: 0792397053
37. *A Theory of Learning and Generalization: With Applications to Neural Networks and Control Systems*, M. Vidyasagar, Springer-Verlag New York, Inc., Secaucus, NJ, 1997
38. *Theory of Probability: A Critical Introductory Treatment*, Bruno de Finetti, Wiley and Sons, 1970

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