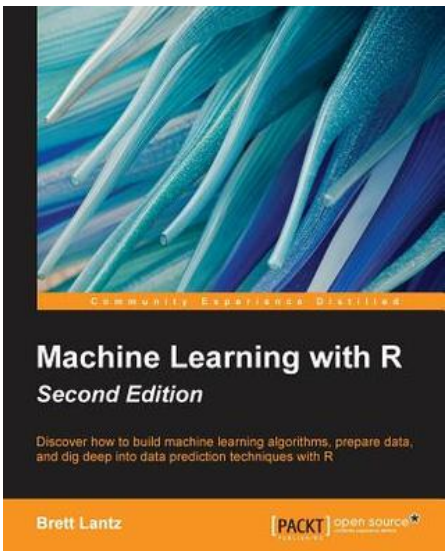

Machine Learning with R - Second Edition

Brett Lantz

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Discover how to build machine learning algorithms, prepare data, and dig deep into data prediction techniques with R About This Book Harness the power of R for statistical computing and data science Explore, forecast, and classify data with R Use R to apply common machine learning algorithms to real-world scenarios Who This Book Is For

Perhaps you already know a bit about machine learning but have never used R, or perhaps you know a little R but are new to machine learning. In either case, this book will get you up and running quickly. It would be helpful to have a bit of familiarity with basic programming concepts, but no prior experience is required.

What You Will Learn Harness the power of R to build common machine learning algorithms with real-world data science applications Get to grips with R techniques to clean and prepare your data for analysis, and visualize your results Discover the different types of machine learning models and learn which is best to meet your data needs and solve your analysis problems Classify your data with Bayesian and nearest neighbor methods Predict values by using R to build decision trees, rules, and support vector machines Forecast numeric values with linear regression, and model your data with neural networks Evaluate and improve the performance of machine learning models Learn specialized machine learning techniques for text mining, social network data, big data, and more In Detail

Updated and upgraded to the latest libraries and most modern thinking, Machine Learning with R, Second Edition provides you with a rigorous introduction to this essential skill of professional data science. Without shying away from technical theory, it is written to provide focused and practical knowledge to get you building algorithms and crunching your data, with minimal previous experience.

With this book, you'll discover all the analytical tools you need to gain insights from complex data and learn how to choose the correct algorithm for your specific needs. Through full engagement with the sort of real-world problems data-wranglers face, you'll learn to apply machine learning methods to deal with common tasks, including classification, prediction, forecasting, market analysis, and clustering.

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From Reader Review Machine Learning with R - Second Edition for online ebook

Benoit says

A great book for beginners in Machine Learning. Good choice of topics covered. Excellent insight into the practical aspects of ML. Missing only more in-depth discussions on the underlying maths.

Ganes Kesari says

A very good book on the basics of machine learning that covers the breadth of techniques and does a good job of introducing model evaluation & tuning methods. Each chapter has parallel illustrations of R code, with application of techniques to practical problems solved using R libraries.

The model internals and advanced concepts of techniques aren't covered, but that seems to be a well thought plan.

Walter says

If you need a proper introduction to Machine Learning for professional reasons or even just for your own edification, do yourself a favor and pick up this gem of text.

Make sure you are 'language agnostic' before you begin. Let me explain, right now the python libraries are all the rage: Pytorch, Keras, TensorFlow, ScikitLearn, etc... Thus, you might be tempted to believe that in getting yourself acquainted with ML in R you are putting yourself at a disadvantage. You'd be wrong.

Truth it, you should be approaching the subject with the idea of learning from a conceptual and practical standpoint, albeit at a high level. The language you use will make little difference at the beginning. This was my main concern as I needed to learn "python ML" for professional reasons. Make no mistake, this book along with the available code up on the author's GitHub will guide you through the language, the hard to grasp concepts, and the terminology in a way that is pedagogically so effective that you'd be left wondering how it is that most technical books never reach this level of clarity. You'll be carrying conversations with experienced ML practitioners in no time, without embarrassing yourself (too much).

Take it for what it is though, an introduction. If you need to know every pedantic detail about how neural networks learn, the heavy mathematical proofs behind the algorithms, etc., then you'd be much better served looking elsewhere.

Once you go through this text, you'll be able to jump on the Python bandwagon all while avoiding the risk of having the language's technicalities distract you from the core concepts.

Go for it, happy learning.

Peter Baumgartner says

This book has opened a new world for me! I bought it to get some understanding about machine learning. The book holds everything what it promises in the title: The author gives not only a very gentle introduction to key issues in statistics – even explaining simple things like the difference between mean and median – but also a crash course on R so that you could follow and experiment with the data on your own.

Especially intriguing for me was not only, that one could follow the data analysis hands-on with no previous knowledge of R but with **real data sets**! (I didn't know previously that there are real data sets free available on the internet (for instance at the UCI machine learning repository)

I have to confess that some of the statistical details in the later chapters I didn't understand completely in my first reading. But I didn't expect that with my first dive into the domain of machine learning I will become a professional data scientist. I got some understanding about the main concepts and know now where to go for further practice and to build up my skills for analysing big data.

From an educational point of view the structure of the book is also (almost) perfect: After two introductory chapters (one about general features of machine learning and one about the first steps and general syntax of R) the next seven chapters follow the same outline:
(A) Providing a general understand of the algorithms with strength and weaknesses: Explaining the most important formulas and the effects demonstrating with some illustrative sample data. This provides you with a qualitative understanding of the method.
(B) The chapter continues with a practical demonstration in the following order:
Step 1: Collecting data: Where to get the data set, references and explaining the structure of the data.
Step 2: Exploring and preparing the data. Every R-command to load the data, to transform etc. is explained and written down as code. The data and even these command are provided in a .zip archive at github.
Step 3: Training the model on the data
Step 4: Evaluating the model performance, looking for and discussing the false positives and false negatives including their effects in the real world. **Step 5:** Improving the performance of the model.
(C) And finally a summary with lessons learned from this chapter.
(D) Like the first two chapters also the structure of the last three chapters are different: They are dedicates on strategies for evaluating and improving of model performances and some other specialised issues on machine learning.

Above I mentioned the word "almost perfect": The only three things I was missing: (1) Please provide a section with exercises and solutions for the next edition! This would be very important for the transfer from understanding to applicable skills. (2) I would like to see one application in learning analytics with a real data set from the educational domain. (3) And there should be a last chapter "Where to go from here now".

But all in all: One of the best tutorial books I have read!