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# Machine Learning With R Cookbook

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R Data Analysis Cookbook  
Machine Learning with R Cookbook  
R Cookbook  
R for Data Science  
Machine Learning with R Cookbook - Second Edition  
Machine Learning with Python Cookbook  
RStudio for R Statistical Computing Cookbook  
Hands-On Machine Learning with R  
R Graphics Cookbook  
Machine Learning with Amazon SageMaker Cookbook  
Apache Spark Deep Learning Cookbook  
Python Machine Learning Cookbook  
PyTorch 1.x Reinforcement Learning Cookbook  
The Art of Machine Learning  
R: Recipes for Analysis, Visualization and Machine Learning  
Deep Learning with R  
Deep Learning with R Cookbook  
Ensemble Machine Learning Cookbook  
Mastering Machine Learning with R  
Introduction to Machine Learning with R  
Hands-On Deep Learning with R  
Practical Data Science Cookbook  
R Deep Learning Cookbook  
R: Recipes for Analysis, Visualization and Machine Learning  
Machine Learning Using TensorFlow Cookbook  
Machine Learning with R Cookbook  
R Statistics Cookbook  
Practical Machine Learning Cookbook  
Java Deep Learning Cookbook  
Machine Learning for Cybersecurity Cookbook  
Python Machine Learning Cookbook  
R Cookbook  
R Bioinformatics Cookbook  
R Cookbook  
R for Data Science Cookbook  
TensorFlow Machine Learning Cookbook  
Deep Learning Cookbook  
R Machine Learning by Example

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## LAILA HERRING

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*R Data Analysis Cookbook* "O'Reilly Media, Inc."

Resolving and offering solutions to your machine learning problems with R About This Book Implement a wide range of algorithms and techniques for tackling complex data Improve predictions and recommendations to have better levels of accuracy Optimize performance of your machine-learning systems Who This Book Is For This book is for analysts, statisticians, and data scientists with knowledge of fundamentals of machine learning and statistics, who need help in dealing with challenging scenarios faced every day of working in the field of machine learning and improving system performance and accuracy. It is assumed that as a reader you have a good understanding of mathematics. Working knowledge of R is expected. What You Will Learn Get equipped with a deeper understanding of how to apply machine-learning techniques Implement each of the advanced machine-learning techniques Solve real-life problems that are encountered in order to make your applications produce improved results Gain hands-on experience in problem solving for your machine-learning systems Understand the methods of collecting data, preparing data for usage, training the model, evaluating the model's performance, and improving the model's performance In Detail Machine learning has become the new black. The challenge in today's world is the explosion of data from existing legacy data and incoming new structured and unstructured data. The complexity of discovering, understanding, performing analysis, and predicting outcomes on the data using machine learning algorithms is a challenge. This cookbook will help solve everyday challenges you face as a data scientist. The application of various data science techniques and on multiple data sets based on real-world challenges you face will help you appreciate a variety of techniques used in various situations. The first half of the book provides recipes on fairly complex machine-learning systems, where you'll learn to explore new areas of applications of machine learning and improve its efficiency. That includes recipes on classifications, neural networks, unsupervised and supervised learning, deep learning, reinforcement learning, and more. The second half of the book focuses on three different machine learning case studies, all based on real-world data, and offers solutions and solves specific machine-learning issues in each one. Style and approach Following a cookbook approach, we'll teach you how to solve everyday difficulties and struggles you encounter.

**Machine Learning with R Cookbook** Packt Publishing Ltd

Explore machine learning concepts using the latest numerical computing library — TensorFlow — with the help of this comprehensive cookbook About This Book Your quick guide to implementing TensorFlow in your day-to-day machine learning activities Learn advanced techniques that bring more accuracy and speed to machine learning Upgrade your knowledge to the second generation of machine learning with this guide on TensorFlow Who This Book Is For This book is ideal for data scientists who are familiar with C++ or Python and perform machine learning activities on a day-to-day basis. Intermediate and advanced machine learning implementers who need a quick guide they can easily navigate will find it useful. What You Will Learn Become familiar with the basics of the

TensorFlow machine learning library Get to know Linear Regression techniques with TensorFlow Learn SVMs with hands-on recipes Implement neural networks and improve predictions Apply NLP and sentiment analysis to your data Master CNN and RNN through practical recipes Take TensorFlow into production In Detail TensorFlow is an open source software library for Machine Intelligence. The independent recipes in this book will teach you how to use TensorFlow for complex data computations and will let you dig deeper and gain more insights into your data than ever before. You'll work through recipes on training models, model evaluation, sentiment analysis, regression analysis, clustering analysis, artificial neural networks, and deep learning – each using Google's machine learning library TensorFlow. This guide starts with the fundamentals of the TensorFlow library which includes variables, matrices, and various data sources. Moving ahead, you will get hands-on experience with Linear Regression techniques with TensorFlow. The next chapters cover important high-level concepts such as neural networks, CNN, RNN, and NLP. Once you are familiar and comfortable with the TensorFlow ecosystem, the last chapter will show you how to take it to production. Style and approach This book takes a recipe-based approach where every topic is explicated with the help of a real-world example.

**R Cookbook** Packt Publishing Ltd

Get savvy with R language and actualize projects aimed at analysis, visualization and machine learning About This Book Proficiently analyze data and apply machine learning techniques Generate visualizations, develop interactive visualizations and applications to understand various data exploratory functions in R Construct a predictive model by using a variety of machine learning packages Who This Book Is For This Learning Path is ideal for those who have been exposed to R, but have not used it extensively yet. It covers the basics of using R and is written for new and intermediate R users interested in learning. This Learning Path also provides in-depth insights into professional techniques for analysis, visualization, and machine learning with R – it will help you increase your R expertise, regardless of your level of experience. What You Will Learn Get data into your R environment and prepare it for analysis Perform exploratory data analyses and generate meaningful visualizations of the data Generate various plots in R using the basic R plotting techniques Create presentations and learn the basics of creating apps in R for your audience Create and inspect the transaction dataset, performing association analysis with the Apriori algorithm Visualize associations in various graph formats and find frequent itemset using the ECLAT algorithm Build, tune, and evaluate predictive models with different machine learning packages Incorporate R and Hadoop to solve machine learning problems on big data In Detail The R language is a powerful, open source, functional programming language. At its core, R is a statistical programming language that provides impressive tools to analyze data and create high-level graphics. This Learning Path is chock-full of recipes. Literally! It aims to excite you with awesome projects focused on analysis, visualization, and machine learning. We'll start off with data analysis – this will show you ways to use R to generate professional analysis reports. We'll then move on to visualizing our data – this provides you with all the guidance needed to get comfortable with data visualization with R. Finally, we'll move into the world of machine learning – this introduces you to data classification, regression,

clustering, association rule mining, and dimension reduction. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: R Data Analysis Cookbook by Viswa Viswanathan and Shanthi Viswanathan R Data Visualization Cookbook by Atmajitsinh Gohil Machine Learning with R Cookbook by Yu-Wei, Chiu (David Chiu) Style and approach This course creates a smooth learning path that will teach you how to analyze data and create stunning visualizations. The step-by-step instructions provided for each recipe in this comprehensive Learning Path will show you how to create machine learning projects with R.

*R for Data Science* Packt Publishing Ltd

A step-by-step solution-based guide to preparing building, training, and deploying high-quality machine learning models with Amazon SageMaker Key Features Perform ML experiments with built-in and custom algorithms in SageMaker Explore proven solutions when working with TensorFlow, PyTorch, Hugging Face Transformers, and scikit-learn Use the different features and capabilities of SageMaker to automate relevant ML processes Book Description Amazon SageMaker is a fully managed machine learning (ML) service that helps data scientists and ML practitioners manage ML experiments. In this book, you'll use the different capabilities and features of Amazon SageMaker to solve relevant data science and ML problems. This step-by-step guide features 80 proven recipes designed to give you the hands-on machine learning experience needed to contribute to real-world experiments and projects. You'll cover the algorithms and techniques that are commonly used when training and deploying NLP, time series forecasting, and computer vision models to solve ML problems. You'll explore various solutions for working with deep learning libraries and frameworks such as TensorFlow, PyTorch, and Hugging Face Transformers in Amazon SageMaker. You'll also learn how to use SageMaker Clarify, SageMaker Model Monitor, SageMaker Debugger, and SageMaker Experiments to debug, manage, and monitor multiple ML experiments and deployments. Moreover, you'll have a better understanding of how SageMaker Feature Store, Autopilot, and Pipelines can meet the specific needs of data science teams. By the end of this book, you'll be able to combine the different solutions you've learned as building blocks to solve real-world ML problems. What you will learn Train and deploy NLP, time series forecasting, and computer vision models to solve different business problems Push the limits of customization in SageMaker using custom container images Use AutoML capabilities with SageMaker Autopilot to create high-quality models Work with effective data analysis and preparation techniques Explore solutions for debugging and managing ML experiments and deployments Deal with bias detection and ML explainability requirements using SageMaker Clarify Automate intermediate and complex deployments and workflows using a variety of solutions Who this book is for This book is for developers, data scientists, and machine learning practitioners interested in using Amazon SageMaker to build, analyze, and deploy machine learning models with 80 step-by-step recipes. All you need is an AWS account to get things running. Prior knowledge of AWS, machine learning, and the Python programming language will help you to grasp the concepts covered in this book more effectively.

[Machine Learning with R Cookbook - Second Edition](#) Packt Publishing Ltd

Learn to expertly apply a range of machine learning methods to real data with this practical guide. Machine learning without advanced math! This book presents a serious, practical look at machine

learning, preparing you for valuable insights on your own data. The Art of Machine Learning is packed with real dataset examples and sophisticated advice on how to make full use of powerful machine learning methods. Readers will need only an intuitive grasp of charts, graphs, and the slope of a line, as well as familiarity with the R programming language. You'll become skilled in a range of machine learning methods, starting with the simple k-Nearest Neighbors method (k-NN), then on to random forests, gradient boosting, linear/logistic models, support vector machines, the LASSO, and neural networks. Final chapters introduce text and image classification, as well as time series. You'll learn not only how to use machine learning methods, but also why these methods work, providing the strong foundational background you'll need in practice. Additional features: How to avoid common problems, such as dealing with "dirty" data and factor variables with large numbers of levels A look at typical misconceptions, such as dealing with unbalanced data Exploration of the famous Bias-Variance Tradeoff, central to machine learning, and how it plays out in practice for each machine learning method Dozens of illustrative examples involving real datasets of varying size and field of application Standard R packages are used throughout, with a simple wrapper interface to provide convenient access. After finishing this book, you will be well equipped to start applying machine learning techniques to your own datasets.

**Machine Learning with Python Cookbook** CRC Press

"Practical recipes for visualizing data"--Cover.

**RStudio for R Statistical Computing Cookbook** Packt Publishing Ltd

Powerful, independent recipes to build deep learning models in different application areas using R libraries About This Book\* Master intricacies of R deep learning packages such as mxnet & tensorflow\* Learn application on deep learning in different domains using practical examples from text, image and speech\* Guide to set-up deep learning models using CPU and GPU Who This Book Is For Data science professionals or analysts who have performed machine learning tasks and now want to explore deep learning and want a quick reference that could address the pain points while implementing deep learning. Those who wish to have an edge over other deep learning professionals will find this book quite useful. What You Will Learn\* Build deep learning models in different application areas using TensorFlow, H2O, and MXnet.\* Analyzing a Deep boltzmann machine\* Setting up and Analysing Deep belief networks\* Building supervised model using various machine learning algorithms\* Set up variants of basic convolution function\* Represent data using Autoencoders.\* Explore generative models available in Deep Learning.\* Discover sequence modeling using Recurrent nets\* Learn fundamentals of Reinforcement Learning\* Learn the steps involved in applying Deep Learning in text mining\* Explore application of deep learning in signal processing\* Utilize Transfer learning for utilizing pre-trained model\* Train a deep learning model on a GPU In Detail Deep Learning is the next big thing. It is a part of machine learning. It's favorable results in applications with huge and complex data is remarkable. Simultaneously, R programming language is very popular amongst the data miners and statisticians. This book will help you to get through the problems that you face during the execution of different tasks and Understand hacks in deep learning, neural networks, and advanced machine learning techniques. It will also take you through complex deep learning algorithms and various deep learning packages and libraries in R. It will be starting with different packages in Deep Learning to neural networks and structures. You will also

encounter the applications in text mining and processing along with a comparison between CPU and GPU performance. By the end of the book, you will have a logical understanding of Deep learning and different deep learning packages to have the most appropriate solutions for your problems. Style and approach Collection of hands-on recipes that would act as your all-time reference for your deep learning needs

#### **Hands-On Machine Learning with R** "O'Reilly Media, Inc."

Over 60 recipes to model and handle real-life biological data using modern libraries from the R ecosystem  
 Key Features  
 Apply modern R packages to handle biological data using real-world examples  
 Represent biological data with advanced visualizations suitable for research and publications  
 Handle real-world problems in bioinformatics such as next-generation sequencing, metagenomics, and automating analyses  
 Book Description  
 Handling biological data effectively requires an in-depth knowledge of machine learning techniques and computational skills, along with an understanding of how to use tools such as edgeR and DESeq. With the R Bioinformatics Cookbook, you'll explore all this and more, tackling common and not-so-common challenges in the bioinformatics domain using real-world examples. This book will use a recipe-based approach to show you how to perform practical research and analysis in computational biology with R. You will learn how to effectively analyze your data with the latest tools in Bioconductor, ggplot, and tidyverse. The book will guide you through the essential tools in Bioconductor to help you understand and carry out protocols in RNAseq, phylogenetics, genomics, and sequence analysis. As you progress, you will get up to speed with how machine learning techniques can be used in the bioinformatics domain. You will gradually develop key computational skills such as creating reusable workflows in R Markdown and packages for code reuse. By the end of this book, you'll have gained a solid understanding of the most important and widely used techniques in bioinformatic analysis and the tools you need to work with real biological data. What you will learn  
 Employ Bioconductor to determine differential expressions in RNAseq data  
 Run SAMtools and develop pipelines to find single nucleotide polymorphisms (SNPs) and Indels  
 Use ggplot to create and annotate a range of visualizations  
 Query external databases with Ensembl to find functional genomics information  
 Execute large-scale multiple sequence alignment with DECIPHER to perform comparative genomics  
 Use d3.js and Plotly to create dynamic and interactive web graphics  
 Use k-nearest neighbors, support vector machines and random forests to find groups and classify data  
 Who this book is for  
 This book is for bioinformaticians, data analysts, researchers, and R developers who want to address intermediate-to-advanced biological and bioinformatics problems by learning through a recipe-based approach. Working knowledge of R programming language and basic knowledge of bioinformatics are prerequisites.

#### **R Graphics Cookbook** Packt Publishing Ltd

Comprehensive recipes to give you valuable insights on Transformers, Reinforcement Learning, and more  
 Key Features  
 Deep Learning solutions from Kaggle Masters and Google Developer Experts  
 Get to grips with the fundamentals including variables, matrices, and data sources  
 Learn advanced techniques to make your algorithms faster and more accurate  
 Book Description  
 The independent recipes in Machine Learning Using TensorFlow Cookbook will teach you how to perform complex data computations and gain valuable insights into your data. Dive into recipes on training models,

model evaluation, sentiment analysis, regression analysis, artificial neural networks, and deep learning - each using Google's machine learning library, TensorFlow. This cookbook covers the fundamentals of the TensorFlow library, including variables, matrices, and various data sources. You'll discover real-world implementations of Keras and TensorFlow and learn how to use estimators to train linear models and boosted trees, both for classification and regression. Explore the practical applications of a variety of deep learning architectures, such as recurrent neural networks and Transformers, and see how they can be used to solve computer vision and natural language processing (NLP) problems. With the help of this book, you will be proficient in using TensorFlow, understand deep learning from the basics, and be able to implement machine learning algorithms in real-world scenarios. What you will learn  
 Take TensorFlow into production  
 Implement and fine-tune Transformer models for various NLP tasks  
 Apply reinforcement learning algorithms using the TF-Agents framework  
 Understand linear regression techniques and use Estimators to train linear models  
 Execute neural networks and improve predictions on tabular data  
 Master convolutional neural networks and recurrent neural networks through practical recipes  
 Who this book is for  
 If you are a data scientist or a machine learning engineer, and you want to skip detailed theoretical explanations in favor of building production-ready machine learning models using TensorFlow, this book is for you. Basic familiarity with Python, linear algebra, statistics, and machine learning is necessary to make the most out of this book.

#### "O'Reilly Media, Inc."

Explore over 110 recipes to analyze data and build predictive models with simple and easy-to-use R code  
 About This Book  
 Apply R to simplify predictive modeling with short and simple code  
 Use machine learning to solve problems ranging from small to big data  
 Build a training and testing dataset, applying different classification methods.  
 Who This Book Is For  
 This book is for data science professionals, data analysts, or people who have used R for data analysis and machine learning who now wish to become the go-to person for machine learning with R. Those who wish to improve the efficiency of their machine learning models and need to work with different kinds of data set will find this book very insightful. What You Will Learn  
 Create and inspect transaction datasets and perform association analysis with the Apriori algorithm  
 Visualize patterns and associations using a range of graphs and find frequent item-sets using the Eclat algorithm  
 Compare differences between each regression method to discover how they solve problems  
 Detect and impute missing values in air quality data  
 Predict possible churn users with the classification approach  
 Plot the autocorrelation function with time series analysis  
 Use the Cox proportional hazards model for survival analysis  
 Implement the clustering method to segment customer data  
 Compress images with the dimension reduction method  
 Incorporate R and Hadoop to solve machine learning problems on big data  
 In Detail  
 Big data has become a popular buzzword across many industries. An increasing number of people have been exposed to the term and are looking at how to leverage big data in their own businesses, to improve sales and profitability. However, collecting, aggregating, and visualizing data is just one part of the equation. Being able to extract useful information from data is another task, and a much more challenging one. Machine Learning with R Cookbook, Second Edition uses a practical approach to teach you how to perform machine learning with R. Each chapter is divided into several simple recipes. Through the step-by-step instructions provided in each recipe, you will

be able to construct a predictive model by using a variety of machine learning packages. In this book, you will first learn to set up the R environment and use simple R commands to explore data. The next topic covers how to perform statistical analysis with machine learning analysis and assess created models, covered in detail later on in the book. You'll also learn how to integrate R and Hadoop to create a big data analysis platform. The detailed illustrations provide all the information required to start applying machine learning to individual projects. With Machine Learning with R Cookbook, machine learning has never been easier. Style and approach This is an easy-to-follow guide packed with hands-on examples of machine learning tasks. Each topic includes step-by-step instructions on tackling difficulties faced when applying R to machine learning.

#### **Machine Learning with Amazon SageMaker Cookbook** Packt Publishing Ltd

Over 100 hands-on recipes to effectively solve real-world data problems using the most popular R packages and techniques About This Book Gain insight into how data scientists collect, process, analyze, and visualize data using some of the most popular R packages Understand how to apply useful data analysis techniques in R for real-world applications An easy-to-follow guide to make the life of data scientist easier with the problems faced while performing data analysis Who This Book Is For This book is for those who are already familiar with the basic operation of R, but want to learn how to efficiently and effectively analyze real-world data problems using practical R packages. What You Will Learn Get to know the functional characteristics of R language Extract, transform, and load data from heterogeneous sources Understand how easily R can confront probability and statistics problems Get simple R instructions to quickly organize and manipulate large datasets Create professional data visualizations and interactive reports Predict user purchase behavior by adopting a classification approach Implement data mining techniques to discover items that are frequently purchased together Group similar text documents by using various clustering methods In Detail This cookbook offers a range of data analysis samples in simple and straightforward R code, providing step-by-step resources and time-saving methods to help you solve data problems efficiently. The first section deals with how to create R functions to avoid the unnecessary duplication of code. You will learn how to prepare, process, and perform sophisticated ETL for heterogeneous data sources with R packages. An example of data manipulation is provided, illustrating how to use the “dplyr” and “data.table” packages to efficiently process larger data structures. We also focus on “ggplot2” and show you how to create advanced figures for data exploration. In addition, you will learn how to build an interactive report using the “ggvis” package. Later chapters offer insight into time series analysis on financial data, while there is detailed information on the hot topic of machine learning, including data classification, regression, clustering, association rule mining, and dimension reduction. By the end of this book, you will understand how to resolve issues and will be able to comfortably offer solutions to problems encountered while performing data analysis. Style and approach This easy-to-follow guide is full of hands-on examples of data analysis with R. Each topic is fully explained beginning with the core concept, followed by step-by-step practical examples, and concluding with detailed explanations of each concept used.

#### **Apache Spark Deep Learning Cookbook** Packt Publishing Ltd

Master machine learning techniques with R to deliver insights for complex projects About This Book Get to grips with the application of Machine Learning methods using an extensive set of R packages

Understand the benefits and potential pitfalls of using machine learning methods Implement the numerous powerful features offered by R with this comprehensive guide to building an independent R-based ML system Who This Book Is For If you want to learn how to use R's machine learning capabilities to solve complex business problems, then this book is for you. Some experience with R and a working knowledge of basic statistical or machine learning will prove helpful. What You Will Learn Gain deep insights to learn the applications of machine learning tools to the industry Manipulate data in R efficiently to prepare it for analysis Master the skill of recognizing techniques for effective visualization of data Understand why and how to create test and training data sets for analysis Familiarize yourself with fundamental learning methods such as linear and logistic regression Comprehend advanced learning methods such as support vector machines Realize why and how to apply unsupervised learning methods In Detail Machine learning is a field of Artificial Intelligence to build systems that learn from data. Given the growing prominence of R—a cross-platform, zero-cost statistical programming environment—there has never been a better time to start applying machine learning to your data. The book starts with introduction to Cross-Industry Standard Process for Data Mining. It takes you through Multivariate Regression in detail. Moving on, you will also address Classification and Regression trees. You will learn a couple of “Unsupervised techniques”. Finally, the book will walk you through text analysis and time series. The book will deliver practical and real-world solutions to problems and variety of tasks such as complex recommendation systems. By the end of this book, you will gain expertise in performing R machine learning and will be able to build complex ML projects using R and its packages. Style and approach This is a book explains complicated concepts with easy to follow theory and real-world, practical applications. It demonstrates the power of R and machine learning extensively while highlighting the constraints.

#### **Python Machine Learning Cookbook** Packt Publishing Ltd

Perform data analysis with R quickly and efficiently with more than 275 practical recipes in this expanded second edition. The R language provides everything you need to do statistical work, but its structure can be difficult to master. These task-oriented recipes make you productive with R immediately. Solutions range from basic tasks to input and output, general statistics, graphics, and linear regression. Each recipe addresses a specific problem and includes a discussion that explains the solution and provides insight into how it works. If you're a beginner, R Cookbook will help get you started. If you're an intermediate user, this book will jog your memory and expand your horizons. You'll get the job done faster and learn more about R in the process. Create vectors, handle variables, and perform basic functions Simplify data input and output Tackle data structures such as matrices, lists, factors, and data frames Work with probability, probability distributions, and random variables Calculate statistics and confidence intervals and perform statistical tests Create a variety of graphic displays Build statistical models with linear regressions and analysis of variance (ANOVA) Explore advanced statistical techniques, such as finding clusters in your data

#### **PyTorch 1.x Reinforcement Learning Cookbook** Packt Publishing Ltd

Machine learning is an intimidating subject until you know the fundamentals. If you understand basic coding concepts, this introductory guide will help you gain a solid foundation in machine learning principles. Using the R programming language, you'll first start to learn with regression modelling

and then move into more advanced topics such as neural networks and tree-based methods. Finally, you'll delve into the frontier of machine learning, using the caret package in R. Once you develop a familiarity with topics such as the difference between regression and classification models, you'll be able to solve an array of machine learning problems. Author Scott V. Burger provides several examples to help you build a working knowledge of machine learning. Explore machine learning models, algorithms, and data training Understand machine learning algorithms for supervised and unsupervised cases Examine statistical concepts for designing data for use in models Dive into linear regression models used in business and science Use single-layer and multilayer neural networks for calculating outcomes Look at how tree-based models work, including popular decision trees Get a comprehensive view of the machine learning ecosystem in R Explore the powerhouse of tools available in R's caret package

[The Art of Machine Learning](#) Packt Publishing Ltd

Machine Learning with R Cookbook Packt Publishing Ltd

**R: Recipes for Analysis, Visualization and Machine Learning** Packt Publishing Ltd

Tackle the complex challenges faced while building end-to-end deep learning models using modern R libraries Key Features Understand the intricacies of R deep learning packages to perform a range of deep learning tasks Implement deep learning techniques and algorithms for real-world use cases Explore various state-of-the-art techniques for fine-tuning neural network models Book Description Deep learning (DL) has evolved in recent years with developments such as generative adversarial networks (GANs), variational autoencoders (VAEs), and deep reinforcement learning. This book will get you up and running with R 3.5.x to help you implement DL techniques. The book starts with the various DL techniques that you can implement in your apps. A unique set of recipes will help you solve binomial and multinomial classification problems, and perform regression and hyperparameter optimization. To help you gain hands-on experience of concepts, the book features recipes for implementing convolutional neural networks (CNNs), recurrent neural networks (RNNs), and Long short-term memory (LSTMs) networks, as well as sequence-to-sequence models and reinforcement learning. You'll then learn about high-performance computation using GPUs, along with learning about parallel computation capabilities in R. Later, you'll explore libraries, such as MXNet, that are designed for GPU computing and state-of-the-art DL. Finally, you'll discover how to solve different problems in NLP, object detection, and action identification, before understanding how to use pre-trained models in DL apps. By the end of this book, you'll have comprehensive knowledge of DL and DL packages, and be able to develop effective solutions for different DL problems. What you will learn Work with different datasets for image classification using CNNs Apply transfer learning to solve complex computer vision problems Use RNNs and their variants such as LSTMs and Gated Recurrent Units (GRUs) for sequence data generation and classification Implement autoencoders for DL tasks such as dimensionality reduction, denoising, and image colorization Build deep generative models to create photorealistic images using GANs and VAEs Use MXNet to accelerate the training of DL models through distributed computing Who this book is for This deep learning book is for data scientists, machine learning practitioners, deep learning researchers and AI enthusiasts who want to learn key tasks in deep learning domains using a recipe-based approach. A strong understanding of machine learning and working knowledge of the R programming language is

mandatory.

**Deep Learning with R** Simon and Schuster

Over 50 practical and useful recipes to help you perform data analysis with R by unleashing every native RStudio feature About This Book 54 useful and practical tasks to improve working systems Includes optimizing performance and reliability or uptime, reporting, system management tools, interfacing to standard data ports, and so on Offers 10-15 real-life, practical improvements for each user type Who This Book Is For This book is targeted at R statisticians, data scientists, and R programmers. Readers with R experience who are looking to take the plunge into statistical computing will find this Cookbook particularly indispensable. What You Will Learn Familiarize yourself with the latest advanced R console features Create advanced and interactive graphics Manage your R project and project files effectively Perform reproducible statistical analyses in your R projects Use RStudio to design predictive models for a specific domain-based application Use RStudio to effectively communicate your analyses results and even publish them to a blog Put yourself on the frontiers of data science and data monetization in R with all the tools that are needed to effectively communicate your results and even transform your work into a data product In Detail The requirement of handling complex datasets, performing unprecedented statistical analysis, and providing real-time visualizations to businesses has concerned statisticians and analysts across the globe. RStudio is a useful and powerful tool for statistical analysis that harnesses the power of R for computational statistics, visualization, and data science, in an integrated development environment. This book is a collection of recipes that will help you learn and understand RStudio features so that you can effectively perform statistical analysis and reporting, code editing, and R development. The first few chapters will teach you how to set up your own data analysis project in RStudio, acquire data from different data sources, and manipulate and clean data for analysis and visualization purposes. You'll get hands-on with various data visualization methods using ggplot2, and you will create interactive and multidimensional visualizations with D3.js. Additional recipes will help you optimize your code; implement various statistical models to manage large datasets; perform text analysis and predictive analysis; and master time series analysis, machine learning, forecasting; and so on. In the final few chapters, you'll learn how to create reports from your analytical application with the full range of static and dynamic reporting tools that are available in RStudio so that you can effectively communicate results and even transform them into interactive web applications. Style and approach RStudio is an open source Integrated Development Environment (IDE) for the R platform. The R programming language is used for statistical computing and graphics, which RStudio facilitates and enhances through its integrated environment. This Cookbook will help you learn to write better R code using the advanced features of the R programming language using RStudio. Readers will learn advanced R techniques to compute the language and control object evaluation within R functions. Some of the contents are: Accessing an API with R Substituting missing values by interpolation Performing data filtering activities R Statistical implementation for Geospatial data Developing shiny add-ins to expand RStudio functionalities Using GitHub with RStudio Modelling a recommendation engine with R Using R Markdown for static and dynamic reporting Curating a blog through RStudio Advanced statistical modelling with R and RStudio

**Deep Learning with R Cookbook** "O'Reilly Media, Inc."

Implement reinforcement learning techniques and algorithms with the help of real-world examples and recipes

**Key Features**

- Use PyTorch 1.x to design and build self-learning artificial intelligence (AI) models
- Implement RL algorithms to solve control and optimization challenges faced by data scientists today
- Apply modern RL libraries to simulate a controlled environment for your projects

**Description**

Reinforcement learning (RL) is a branch of machine learning that has gained popularity in recent times. It allows you to train AI models that learn from their own actions and optimize their behavior. PyTorch has also emerged as the preferred tool for training RL models because of its efficiency and ease of use. With this book, you'll explore the important RL concepts and the implementation of algorithms in PyTorch 1.x. The recipes in the book, along with real-world examples, will help you master various RL techniques, such as dynamic programming, Monte Carlo simulations, temporal difference, and Q-learning. You'll also gain insights into industry-specific applications of these techniques. Later chapters will guide you through solving problems such as the multi-armed bandit problem and the cartpole problem using the multi-armed bandit algorithm and function approximation. You'll also learn how to use Deep Q-Networks to complete Atari games, along with how to effectively implement policy gradients. Finally, you'll discover how RL techniques are applied to Blackjack, Gridworld environments, internet advertising, and the Flappy Bird game. By the end of this book, you'll have developed the skills you need to implement popular RL algorithms and use RL techniques to solve real-world problems. What you will learn

- Use Q-learning and the state-action-reward-state-action (SARSA) algorithm to solve various Gridworld problems
- Develop a multi-armed bandit algorithm to optimize display advertising
- Scale up learning and control processes using Deep Q-Networks
- Simulate Markov Decision Processes, OpenAI Gym environments, and other common control problems
- Select and build RL models, evaluate their performance, and optimize and deploy them
- Use policy gradient methods to solve continuous RL problems

Who this book is for

Machine learning engineers, data scientists and AI researchers looking for quick solutions to different reinforcement learning problems will find this book useful. Although prior knowledge of machine learning concepts is required, experience with PyTorch will be useful but not necessary.

*Ensemble Machine Learning Cookbook* Packt Publishing Ltd

100 recipes that teach you how to perform various machine learning tasks in the real world

**About This Book**

Understand which algorithms to use in a given context with the help of this exciting recipe-based guide

Learn about perceptrons and see how they are used to build neural networks

Stuck while making sense of images, text, speech, and real estate? This guide will come to your rescue, showing you how to perform machine learning for each one of these using various techniques

**Who This Book Is For**

This book is for Python programmers who are looking to use machine-learning algorithms to create real-world applications. This book is friendly to Python beginners, but familiarity with Python programming would certainly be useful to play around with the code.

**What You Will Learn**

- Explore classification algorithms and apply them to the income bracket estimation problem
- Use predictive modeling and apply it to real-world problems
- Understand how to perform market segmentation using unsupervised learning
- Explore data visualization techniques to interact with your data in diverse ways
- Find out how to build a recommendation engine
- Understand how to interact with text data and build models to analyze it
- Work with speech

data and recognize spoken words using Hidden Markov Models

Analyze stock market data using Conditional Random Fields

Work with image data and build systems for image recognition and biometric face recognition

Grasp how to use deep neural networks to build an optical character recognition system

**In Detail**

Machine learning is becoming increasingly pervasive in the modern data-driven world. It is used extensively across many fields such as search engines, robotics, self-driving cars, and more. With this book, you will learn how to perform various machine learning tasks in different environments. We'll start by exploring a range of real-life scenarios where machine learning can be used, and look at various building blocks. Throughout the book, you'll use a wide variety of machine learning algorithms to solve real-world problems and use Python to implement these algorithms. You'll discover how to deal with various types of data and explore the differences between machine learning paradigms such as supervised and unsupervised learning. We also cover a range of regression techniques, classification algorithms, predictive modeling, data visualization techniques, recommendation engines, and more with the help of real-world examples.

**Style and approach**

You will explore various real-life scenarios in this book where machine learning can be used, and learn about different building blocks of machine learning using independent recipes in the book.

*Mastering Machine Learning with R* Packt Publishing Ltd

Explore over 110 recipes to analyze data and build predictive models with simple and easy-to-use R code

**About This Book\***

- Apply R to simplify predictive modeling with short and simple code\*
- Use machine learning to solve problems ranging from small to big data\*
- Build a training and testing dataset, applying different classification methods.

**Who This Book Is For**

This book is for data science professionals, data analysts, or people who have used R for data analysis and machine learning who now wish to become the go-to person for machine learning with R. Those who wish to improve the efficiency of their machine learning models and need to work with different kinds of data set will find this book very insightful.

**What You Will Learn\***

- Create and inspect transaction datasets and perform association analysis with the Apriori algorithm\*
- Visualize patterns and associations using a range of graphs and find frequent item-sets using the Eclat algorithm\*
- Compare differences between each regression method to discover how they solve problems\*
- Detect and impute missing values in air quality data\*
- Predict possible churn users with the classification approach\*
- Plot the autocorrelation function with time series analysis\*
- Use the Cox proportional hazards model for survival analysis\*
- Implement the clustering method to segment customer data\*
- Compress images with the dimension reduction method\*
- Incorporate R and Hadoop to solve machine learning problems on big data

**In Detail**

Big data has become a popular buzzword across many industries. An increasing number of people have been exposed to the term and are looking at how to leverage big data in their own businesses, to improve sales and profitability. However, collecting, aggregating, and visualizing data is just one part of the equation. Being able to extract useful information from data is another task, and a much more challenging one. Machine Learning with R Cookbook, Second Edition uses a practical approach to teach you how to perform machine learning with R. Each chapter is divided into several simple recipes. Through the step-by-step instructions provided in each recipe, you will be able to construct a predictive model by using a variety of machine learning packages. In this book, you will first learn to set up the R environment and use simple R commands to explore data.

The next topic covers how to perform statistical analysis with machine learning analysis and assess created models, covered in detail later on in the book. You'll also learn how to integrate R and Hadoop to create a big data analysis platform. The detailed illustrations provide all the information required to start applying machine learning to individual projects. With Machine Learning with R

Cookbook, machine learning has never been easier. Style and approach This is an easy-to-follow guide packed with hands-on examples of machine learning tasks. Each topic includes step-by-step instructions on tackling difficulties faced when applying R to machine learning.

Best Sellers - Books :

- [Chicka Chicka Boom Boom \(board Book\)](#)
- [How To Win Friends & Influence People \(dale Carnegie Books\) By Dale Carnegie](#)
- [Spare By Prince Harry The Duke Of Sussex](#)
- [Flash Cards: Sight Words](#)
- [The Boy, The Mole, The Fox And The Horse By Charlie Mackesy](#)
- [Twisted Games \(twisted, 2\) By Ana Huang](#)
- [The Light We Carry: Overcoming In Uncertain Times By Michelle Obama](#)
- [The Five-star Weekend By Elin Hilderbrand](#)
- [Reminders Of Him: A Novel By Colleen Hoover](#)
- [Things We Hide From The Light \(knockemout Series, 2\) By Lucy Score](#)