

Read Book
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Analytics With R
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Analytics
With R Packt
Publishing

Behavior Analysis
with Machine
Learning Using R
introduces
machine learning

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and deep learning concepts and algorithms applied to a diverse set of behavior analysis problems. It focuses on the practical aspects of solving such problems based on data collected from sensors or

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stored in
electronic
records. The

included
examples
demonstrate how
to perform
common data
analysis tasks
such as: data
exploration,
visualization,
preprocessing,

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data

representation,

model training

and evaluation.

All of this, using

the R

programming

language and real-

life behavioral

data. Even

though the

examples focus

on behavior

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analysis tasks,
the covered
underlying

concepts and
methods can be
applied in any
other domain. No
prior knowledge
in machine
learning is
assumed. Basic
experience with R
and basic

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knowledge in
statistics and high
school level
mathematics are
beneficial.

Features: Build
supervised
machine learning
models to predict
indoor locations
based on WiFi
signals, recognize
physical activities

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from smartphone sensors and 3D skeleton data, detect hand gestures from accelerometer signals, and so on. Program your own ensemble learning methods and use Multi-View Stacking to fuse signals from

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heterogeneous data sources. Use unsupervised learning algorithms to discover criminal behavioral patterns. Build deep learning neural networks with TensorFlow and Keras to classify muscle

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activity from
electromyography
signals and
Convolutional
Neural Networks
to detect smiles
in images.

Evaluate the
performance of
your models in
traditional and
multi-user
settings. Build

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anomaly

Analytics With R

detection models
such as Isolation

Forests and

autoencoders to

detect abnormal

fish behaviors.

This book is

intended for unde

rgraduate/gradua

te students and

researchers from

ubiquitous

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computing,
behavioral
ecology,

psychology, e-
health, and other
disciplines who
want to learn the
basics of machine
learning and deep
learning and for
the more
experienced
individuals who

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want to apply
machine learning
to analyze

behavioral data.

Master Deep

Learning with this

fun, practical,

hands on guide.

With the

explosion of big

data deep

learning is now on

the radar. Large

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companies such as Google, Microsoft, and Facebook have taken notice, and are actively growing in-house deep learning teams. Other large corporations are quickly building out their own teams. If you

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want to join the ranks of today's top data

scientists take advantage of this valuable book. It will help you get started. It reveals how deep learning models work, and takes you under the hood with an easy

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to follow process
showing you how
to build them
faster than you
imagined possible
using the
powerful, free R
predictive
analytics
package.

Bestselling
decision scientist
Dr. N.D Lewis

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shows you the shortcut up the steep steps to the very top. It's easier than you think. Through a simple to follow process you will learn how to build the most successful deep learning models used for learning

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from data. Once you have mastered the process, it will be easy for you to translate your knowledge into your own powerful applications. If you want to accelerate your progress,

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discover the best
in deep learning
and act on what
you have learned,
this book is the
place to get
started. YOU'LL
LEARN HOW TO:
Understand Deep
Neural Networks
Use Autoencoders
Unleash the
power of Stacked

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Autoencoders

Leverage the

Restricted

Boltzmann

Machine Develop

Recurrent Neural

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Deep Belief

Networks

Everything you

need to get

started is

contained within

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you building
algorithms and
crunching your
data, with
minimal previous
experience. With

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this book, you'll
discover all the
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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

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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,

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and clustering.
Examine business
problems and use
a practical
analytical
approach to solve
them by
implementing
predictive models
and machine
learning
techniques using
SAS and the R

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analytical language. This book is ideal for those who are well-versed in writing code and have a basic understanding of statistics, but have limited experience in implementing predictive models

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and machine learning techniques for analyzing real world data. The most challenging part of solving industrial business problems is the practical and hands-on knowledge of

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building and
deploying
advanced
predictive models
and machine
learning
algorithms.

Applied Analytics
through Case
Studies Using SAS
and R is your
answer to solving
these business

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problems by
sharpening your

analytical skills.

What You'll Learn

Understand

analytics and

basic data

concepts Use an

analytical

approach to solve

Industrial

business

problems Build

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predictive model
with machine
learning

techniques

Create and apply
analytical

strategies Who

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Data scientists,

developers,

statisticians,

engineers, and

research students

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with a great
theoretical
understanding of
data and
statistics who
would like to
enhance their
skills by getting
practical
exposure in data
modeling.

Mastering
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With Time Series

and Industry-

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advanced methods

and techniques

ranging from

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to Bayesian

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methods and

MCMC, which can

be put to

immediate use.

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statistical

programming

language Learn

how to implement

applied

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statistics using
practical use-

cases Use Publishing

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packages to work
with

unstructured and
structured data

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tool of choice

for academics, R

has spread deep

into the private

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sector and can
be found in the
production
pipelines at
some of the most
advanced and
successful
enterprises. The
power and domain-
specificity of R
allows the user
to express
complex
analytics

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and succinctly.

Starting with
the basics of R
and statistical
reasoning, this
book dives into
advanced
predictive
analytics,
showing how to
apply those
techniques to
real-world data

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though with real-
world examples.

Packed with

engaging

problems and

exercises, this

book begins with

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and its syntax

with packages

like Rcpp,

ggplot2, and

dplyr. From

there, get to

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grips with the
fundamentals of
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statistics and
build on this
knowledge to
perform
sophisticated
and powerful
analytics. Solve
the difficulties
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performing data
analysis in

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find solutions
to working with
messy data,
large data,
communicating
results, and
facilitating
reproducibility.

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an invaluable
resource through
many stages of

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as a data

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statistical

reasoning and
sampling theory

Employ

hypothesis

testing to draw
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your data Learn

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and time series
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multiple
imputation
Identify and
manage
problematic data

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analyses to
larger data with
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dplyr, and
parallelization
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practices into
effect to make
your job easier
and facilitate
reproducibility

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Who this book is for Budding data scientists and data analysts who are new to the concept of data analysis, or who want to build efficient analytical models in R will find this book to be useful. No prior exposure

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Learning

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to data analysis
is needed,

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although a Publishing

fundamental

understanding of

the R

programming

language is

required to get

the best out of

this book.

Using Python and

R, the author

addresses

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multiple
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including
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brand
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analysis, cross
sectional data,
time series,
spatial and
spatio-temporal
data.

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University's
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program presents

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and product
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choice modeling,
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systems, pricing
research, retail

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customer

retention, and

lifetime value

analysis.

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Analytics left
off, he

integrates

crucial

information and

insights that

were previously

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analytics,

network science,

information

technology, and

programming.

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analytics in

delivering

effective

messages on the

web

Understanding

the web by

understanding

its hidden

structures Being

recognized on

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the web - and

watching your

own competitors

Visualizing

networks and

understanding

communities

within them

Measuring

sentiment and

making

recommendations

Leveraging key

data science

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preparation, cla

ssical/Bayesian

statistics, regr

ession/classific

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learning, and

text analytics

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address

exceptionally

relevant issues

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such as:

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legitimate email
from spam;
identifying
legally-relevant
information for
lawsuit
discovery;
gleaning
insights from
anonymous web
surfing data,
and more. This

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text's extensive
set of web and
network problems
draw on rich
public-domain
data sources;
many are
accompanied by
solutions in
Python and/or R.
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Science will be
an invaluable
resource for all

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enables

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improve their
results and
learn new
approaches
without explicit
instructions—all
ows
organizations to
reveal patterns
in their data
and incorporate
predictive
analytics into

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intelligent,

self-learning

computer

algorithms.

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author and data
analytics

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experts Fred

Nwanganga and

Mike Chapple

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is, demonstrate

its

organizational

benefits, and

provide hands-on

examples created

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real-world

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R programming

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classification

and regression

techniques,

performance

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evaluation, and more. Explores data management techniques, including data collection, exploration and dimensionality reduction Covers unsupervised learning, where readers identify and summarize patterns using

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Describes the

principles

behind the

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Neighbor,

Decision Tree

and Naive Bayes

classification

techniques

Explains how to

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evaluate and
choose the right
model, as well

as how to

improve model

performance

using ensemble

methods such as

Random Forest

and XGBoost

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in R is a must-

have guide for

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and
other

professionals

interested in

leveraging the

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solve business

problems, as

well as students

and independent

learners seeking

to enter the

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field.

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key data

visualization and
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skills using R

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tools of R Make
predictions about
future events by
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Comprehensible
guidelines that
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predictive model

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information
officer, data
scientist, ML
engineer, ML
practitioner,
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for you. You
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programming in R
will also be able
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Customize R by
installing and
loading new
packages Explore
the structure of
data using
clustering
algorithms Turn
unstructured text
into ordered data,

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and acquire
knowledge from
the data Classify
your observations
using Naive
Bayes, k-NN, and
decision trees
Reduce the
dimensionality of
your data using
principal
component

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analysis Discover
association rules
using Apriori

Understand how
statistical
distributions can
help retrieve
information from
data using
correlations,
linear regression,
and multilevel

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regression Use
PMML to deploy
the models

generated in R In
Detail R is
statistical
software that is
used for data
analysis. There
are two main
types of learning
from data:

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unsupervised learning, where the structure of data is extracted automatically; and supervised learning, where a labeled part of the data is used to learn the relationship or scores in a target

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attribute. As important information is often hidden in a lot of data, R helps to extract that information with its many standard and cutting-edge statistical functions. This

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book is packed
with easy-to-
follow guidelines

that explain the
workings of the
many key data
mining tools of R,
which are used to
discover
knowledge from
your data. You
will learn how to

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perform key
predictive
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using R, such as
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predictive models
for classification
and regression
tasks, score new
data sets and so
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book familiarizes
you with the most
common data
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such as k-means,
hierarchical
regression, linear
regression,
association rules,
principal
component
analysis,

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multilevel
modeling, k-NN,
Naive Bayes,
decision trees,
and text mining. It
also provides a
description of
visualization
techniques using
the basic
visualization tools
of R as well as

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lattice for
visualizing
patterns in data

organized in
groups. This book
is invaluable for
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by the data
mining
opportunities
offered by GNU R
and its packages.

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Style and approach This is a practical book, which analyzes compelling data about life, health, and death with the help of tutorials. It offers you a useful way of interpreting the data that's

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specific to this book, but that can also be applied to any other data.

Text data is important for many domains, from healthcare to marketing to the digital humanities, but specialized

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approaches are necessary to create features for machine learning from language.

Supervised
Machine Learning
for Text Analysis
in R explains how to preprocess text data for modeling,

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train models, and
evaluate model
performance

using tools from
the tidyverse and
tidymodels
ecosystem.

Models like these
can be used to
make predictions
for new
observations, to

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understand what natural language features or characteristics contribute to differences in the output, and more. If you are already familiar with the basics of predictive modeling, use the

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comprehensive,
detailed examples
in this book to
extend your skills
to the domain of
natural language
processing. This
book provides
practical guidance
and directly
applicable
knowledge for

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data scientists
and analysts who
want to integrate
unstructured text
data into their
modeling
pipelines. Learn
how to use text
data for both
regression and
classification
tasks, and how to

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apply more straightforward algorithms like regularized regression or support vector machines as well as deep learning approaches.

Natural language must be dramatically

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transformed to be
ready for
computation, so
we explore typical
text
preprocessing and
feature
engineering steps
like tokenization
and word
embeddings from
the ground up.

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These steps influence model results in ways we can measure, both in terms of model metrics and other tangible consequences such as how fair or appropriate model results are.

Introduces

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professionals and
scientists to
statistics and
machine learning
using the
programming
language R
Written by and for
practitioners, this
book provides an
overall
introduction to R,

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focusing on tools and methods commonly used in data science, and placing emphasis on practice and business use. It covers a wide range of topics in a single volume, including big data, databases,

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machine learning,
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data wrangling,
data visualization,
and the reporting
of results. The
topics covered are
all important for
someone with a
science/math
background that
is looking to

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quickly learn
several practical
technologies to
enter or transition
to the growing
field of data
science. The Big R-
Book for
Professionals:
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Machines and
Reporting with R
includes nine

parts, starting
with an

introduction to
the subject and
followed by an

overview of R and
elements of
statistics. The
third part

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revolves around data, while the fourth focuses on data wrangling.

Part 5 teaches readers about exploring data. In Part 6 we learn to build models, Part 7 introduces the reader to the reality in

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companies, Part 8 covers reports and interactive applications and finally Part 9 introduces the reader to big data and performance computing. It also includes some helpful appendices.

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Provides a
practical guide for
non-experts with
a focus on
business users

Contains a unique
combination of
topics including
an introduction to
R, machine
learning,
mathematical

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models, data
Analytics With R

wrangling, and
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reporting Uses a
practical tone and
integrates

multiple topics in
a coherent
framework

Demystifies the
hype around
machine learning
and AI by

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enabling readers
to understand the
provided models
and program
them in R Shows
readers how to
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in static and
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reports
Supplementary
materials includes

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The Big R-Book is
an excellent guide
for science

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Predictive
Analytics With R
Packt Publishing

technology,
engineering, or
mathematics

students who wish
to make a
successful
transition from
the academic
world to the
professional. It
will also appeal to
all young data

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Learning

Predictive

Analytics With R

Packt Publishing

scientists,
quantitative
analysts, and
analytics
professionals, as
well as those who
make
mathematical
models.

R offers a free
and open source
environment that

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Predictive
Analytics With R
Packt Publishing

is perfect for both
learning and
deploying
predictive
modeling
solutions in the
real world. With
its constantly
growing
community and
plethora of
packages, R offers

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Predictive
Analytics With R
Packt Publishing

the functionality to deal with a truly vast array of problems. This book is designed to be both a guide and a reference for moving beyond the basics of predictive modeling. The book begins with

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Analytics With R
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a dedicated chapter on the language of models and the predictive modeling process. Each subsequent chapter tackles a particular type of model, such as neural networks, and focuses on

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Analytics With R
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the three important questions of how the model works, how to use R to train it, and how to measure and assess its performance using real world data sets. By the end of this book,

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Analytics With R
Packt Publishing

you will have explored and tested the most popular modeling techniques in use on real world data sets and mastered a diverse range of techniques in predictive analytics.

Data Science in

Read Book
Learning
Predictive
Education Using
R
Analytics With R
Packt Publishing
A General
Management
Perspective
Parametric
Models for
Regression and
Classification
Using R
Predictive
Analytics

Read Book

Learning

Predictive

Modeling

Techniques in

Predictive

Analytics with R

and Python

Implementing

Predictive Models

and Machine

Learning

Techniques

Tap into the

realm of social

Read Book
Learning
Predictive
*media and
analytics With R
power of Publishing
analytics for
data-driven
insights using R*
About This Book
A practical
guide written to
help leverage
the power of the
R eco-system to
extract,
process,

Read Book

Learning

Predictive

analyze,

visualize and

model social

media data Learn

about data

access,

retrieval,

cleaning, and

curation methods

for data

originating from

various social

media platforms.

Visualize and

Read Book

Learning

Predictive

analyze data

from social

media platforms

to understand

and model

complex

relationships

using various

concepts and

techniques such

as Sentiment

Analysis, Topic

Modeling, Text

Summarization,

Read Book

Learning

Predictive

*Recommendation
Systems, Social
Network*

Analysis,

*Classification,
and Clustering.*

*Who This Book Is
For It is*

*targeted at IT
professionals,*

*Data Scientists,
Analysts,*

Developers,

Machine Learning

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Learning

Predictive

Enthusiasts,
Analytics With R

social media
Book Publishing

*marketers and
anyone with a
keen interest in
data, analytics,
and generating
insights from
social data.*

*Some background
experience in R
would be
helpful, but not
necessary, since*

Read Book Learning

*predictive
Analytics With R
Rock Publishing*
this book is
written keeping
in mind, that

readers can have
varying levels
of expertise.

What You Will

*Learn Learn how
to tap into data
from diverse
social media
platforms using
the R ecosystem
Use social media*

Read Book

Learning

Predictive

data to

formulate and

solve real-world

problems Analyze

user social

networks and

communities

using concepts

from graph

theory and

network analysis

Learn to detect

opinion and

sentiment,

Read Book

Learning

Predictive

*extract themes,
topics, and*

trends from

unstructured

noisy text data

from diverse

social media

channels

Understand the

art of

representing

actionable

insights with

effective

Read Book
Learning
Predictive
visualizations
Analyze data
from major
social media
channels such as
Twitter,
Facebook,
Flickr,
Foursquare,
Github,
StackExchange,
and so on Learn
to leverage
popular R

Read Book

Learning

Predictive

packages such as

ggplot2,

topicmodels,

caret, e1071,

tm, wordcloud,

twittR,

Rfacebook,

dplyr, reshape2,

and many more In

Detail The

Internet has

truly become

humongous,

especially with

Read Book Learning

*the rise of
various forms of
social media in
the last decade,
which give users
a platform to
express
themselves and
also communicate
and collaborate
with each other.
This book will
help the reader
to understand*

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Learning

Predictive

Analytics With R

Book Publishing

the current social media landscape and to learn how analytics can be leveraged to derive insights from it. This data can be analyzed to gain valuable insights into the behavior and engagement of

Read Book

Learning

Predictive

users,

organizations,

businesses, and

brands. It will

help readers

frame business

problems and

solve them using

social data. The

book will also

cover several

practical real-

world use cases

on social media

Read Book

Learning

Predictive

using R and its

advanced

packages to

utilize data

science

methodologies

such as

sentiment

analysis, topic

modeling, text

summarization,

recommendation

systems, social

network

Read Book

Learning

Predictive

analysis,

Analytics With R

and clustering.

This will enable

readers to learn

different hands-

on approaches to

obtain data from

diverse social

media sources

such as Twitter

and Facebook. It

will also show

readers how to

Read Book

Learning

Predictive

establish

Analytics With R

detailed

Book Publishing

workflows to

process,

visualize, and

analyze data to

transform social

data into

actionable

insights. Style

and approach

This book

follows a step-

by-step approach

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Learning

Predictive

Analytics With R

Book Publishing

*with detailed
strategies for
understanding,
extracting,
analyzing,
visualizing, and
modeling data
from several
major social
network
platforms such
as Facebook,
Twitter,
Foursquare,*

Read Book

Learning

Predictive

Flickr, Github,
Analytics With R

and
StackExchange.

*The chapters
cover several
real-world use
cases and
leverage data
science, machine
learning,
network
analysis, and
graph theory
concepts along*

Read Book

Learning

Predictive

with the R

ecosystem,

including

popular packages

such as ggplot2,

caret, dplyr,

topicmodels, tm,

and so on.

This book is

about predictive

analytics. Yet,

each chapter

could easily be

handled by an

Read Book Learning

*entire volume of
its own. So one
might think of
this a survey of
predictive
modeling. A
predictive model
is a statistical
model or machine
learning model
used to predict
future behavior
based on past
behavior. In*

Read Book

Learning

Predictive

*order to use
this book, one*

should have a

basic

understanding of

mathematical

statistics - it

is an advanced

book. Some

theoretical

foundations are

laid out but not

proven, but

references are

Read Book

Learning

Predictive

provided for

additional

coverage. Every

chapter

culminates in an

example using R.

R is a free

software

environment for

statistical

computing and

graphics. You

may download R,

from a preferred

Read Book Learning

CRAN mirror at
[http://www.r-
project.org/](http://www.r-project.org/).

*The book is
organized so
that statistical
models are
presented first
(hopefully in a
logical order),
followed by
machine learning
models, and then
applications:*

Read Book Learning

*predictive modeling
and time series.*

*One could use
this a textbook
with problem
solving in R-but
there are no "by-
hand" exercises.*

*Utilize R to
uncover hidden
patterns in your
Big Data About
This Book*

Perform

Read Book

Learning

Predictive

*computational
analyses on Big*

*Data to generate
meaningful*

*results Get a
practical*

*knowledge of R
programming*

*language while
working on Big*

*Data platforms
like Hadoop,*

*Spark, H2O and
SQL/NoSQL*

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Learning

Predictive

databases,

Analytics With R

Explore fast,

streaming, and

scalable data

analysis with

the most cutting-

edge

technologies in

the market Who

This Book Is For

This book is

intended for

Data Analysts,

Scientists, Data

Read Book Learning

*Engineers,
Statisticians,
Researchers, who
want to
integrate R with
their current or
future Big Data
workflows. It is
assumed that
readers have
some experience
in data analysis
and
understanding of*

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Learning

Predictive

Analytics With R

Book Publishing

*data management
and algorithmic
processing of
large quantities
of data, however
they may lack
specific skills
related to R.*

*What You Will
Learn Learn*

*about current
state of Big
Data processing
using R*

Read Book

Learning

Predictive

programming

language and its

powerful

statistical

capabilities

Deploy Big Data

analytics

platforms with

selected Big

Data tools

supported by R

in a cost-

effective and

time-saving

Read Book Learning

*manner Apply the
R language to
real-world Big
Data problems on
a multi-node
Hadoop cluster,
e.g. electricity
consumption
across various s
ocio-demographic
indicators and
bike share
scheme usage
Explore the*

Read Book Learning

*compatibility of
R with Hadoop,
Spark, SQL and
NoSQL databases,
and H2O platform
In Detail Big
Data analytics
is the process
of examining
large and
complex data
sets that often
exceed the
computational*

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Learning

Predictive

Analytics With R

Book Publishing

capabilities. R is a leading programming language of data science, consisting of powerful functions to tackle all problems related to Big Data processing. The book will begin with a brief

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Learning

Predictive

Analytics With R

Rockt Publishing

*introduction to
the Big Data
world and its
current industry
standards. With
introduction to
the R language
and presenting
its development,
structure,
applications in
real world, and
its
shortcomings.*

Read Book Learning

*Book will
progress towards
revision of
major R
functions for
data management
and
transformations.
Readers will be
introduce to
Cloud based Big
Data solutions
(e.g. Amazon EC2
instances and*

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Learning

Predictive

Amazon RDS,

Microsoft Azure

and its

HDInsight

clusters) and

also provide

guidance on R

connectivity

with relational

and non-

relational

databases such

as MongoDB and

HBase etc. It

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Learning

Predictive

Analytics With R

Book Publishing

will further expand to include Big Data tools such as Apache Hadoop ecosystem, HDFS and MapReduce frameworks. Also other R compatible tools such as Apache Spark, its machine learning library Spark

Read Book Learning

*MLlib, as well
as H2O. Style
and approach*

*This book will
serve as a
practical guide
to tackling Big
Data problems
using R
programming
language and its
statistical
environment.*

Each section of

Read Book Learning

*the book will
present you with
concise and easy-
to-follow steps
on how to
process,
transform and
analyse large
data sets.*

*Applied
Predictive
Modeling covers
the overall
predictive*

Read Book
Learning
Predictive
modeling
Analytics With R
process,
Book Publishing
beginning with
the crucial
steps of data
preprocessing,
data splitting
and foundations
of model tuning.
The text then
provides
intuitive
explanations of
numerous common

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Learning

Predictive

and modern

regression and

classification

techniques,

always with an

emphasis on

illustrating and

solving real

data problems.

The text

illustrates all

parts of the

modeling process

through many

Read Book Learning

hands-on, real-life examples, and every chapter contains extensive R code for each step of the process. This multi-purpose text can be used as an introduction to predictive models and the overall modeling

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*predictive
Analytics With R
Book Publishing*

*process, a
practitioner's
reference*

*handbook, or as
a text for
advanced
undergraduate or
graduate level
predictive
modeling
courses. To that
end, each
chapter contains
problem sets to*

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Learning

Predictive

Analytics With R

Book Publishing

*help solidify
the covered
concepts and
uses data
available in the
book's R
package. This
text is intended
for a broad
audience as both
an introduction
to predictive
models as well
as a guide to*

Read Book Learning

*applying them.
Non-mathematical
readers will
appreciate the
intuitive
explanations of
the techniques
while an
emphasis on
problem-solving
with real data
across a wide
variety of
applications*

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Learning

Predictive

will aid

practitioners

who wish to

extend their

expertise.

Readers should

have knowledge

of basic

statistical

ideas, such as

correlation and

linear

regression

analysis. While

Read Book

Learning

Predictive

Analytics With R

Book Publishing

*the text is
biased against
complex
equations, a
mathematical
background is
needed for
advanced topics.
Fundamentals of
Machine Learning
for Predictive
Data Analytics,
second edition
Expert*

Read Book

Learning

Predictive

*techniques for
predictive*

modeling, 3rd

Edition

*Introduction to
Data Science*

*A Guide to Data
Science*

Learning

Predictive

*Analytics with
Python*

Import, Tidy,

Transform,

Read Book
Learning

Predictive
*Visualize, and
Model Data* With R

**Master the art of
predictive
modeling About
This Book Load,
wrangle, and
analyze your data
using the world's
most powerful
statistical
programming
language**

Page 164/441

Read Book
Learning

**Familiarize
yourself with the
most common
data mining tools
of R, such as k-
means,
hierarchical
regression, linear
regression, Naive
Bayes, decision
trees, text mining
and so on. We
emphasize**

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Learning

Predictive
Analytics With R
Packt Publishing

**important
concepts, such as
the bias-variance
trade-off and
over-fitting,
which are
pervasive in
predictive
modeling Who
This Book Is For If
you work with
data and want to
become an expert**

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Learning

Predictive
Analytics With R
Packt Publishing

**in predictive
analysis and
modeling, then
this Learning
Path will serve
you well. It is
intended for
budding and
seasoned
practitioners of
predictive
modeling alike.
You should have**

Read Book
Learning

**Predictive
Analytics With R
Book Publishing**

**basic knowledge
of the use of R,
although it's not
necessary to put
this Learning
Path to great
use. What You
Will Learn Get to
know the basics
of R's syntax and
major data
structures Write
functions, load**

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Learning

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Analytics With R
Book Publishing

**data, and install
packages Use
different data
sources in R and
know how to
interface with
databases, and
request and load
JSON and XML
Identify the
challenges and
apply your
knowledge about**

Read Book
Learning

Predictive
Analytics With R
Packt Publishing
**data analysis in R
to imperfect real-
world data**

**Predict the future
with reasonably
simple algorithms
Understand key
data visualization
and predictive
analytic skills
using R**

**Understand the
language of**

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Learning

Predictive

**models and the
predictive
modeling process**

In Detail

Predictive

**analytics is a
field that uses
data to build
models that
predict a future
outcome of
interest. It can be
applied to a**

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Learning

Predictive

range of business strategies and

Analytics With R

Packt Publishing

has been a key player in search

advertising and recommendation

engines. The

power and

domain-

specificity of R

allows the user to

express complex

analytics easily,

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Learning

Predictive

Analytics With R

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**quickly, and
succinctly. R
offers a free and
open source
environment that
is perfect for
both learning and
deploying
predictive
modeling
solutions in the
real world. This
Learning Path**

Read Book
Learning

**will provide you
with all the steps
you need to
master the art of
predictive
modeling with R.
We start with an
introduction to
data analysis
with R, and then
gradually you'll
get your feet wet
with predictive**

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Learning

Predictive

Analytics With R

Packt Publishing

modeling. You will get to grips with the fundamentals of applied statistics and build on this knowledge to perform sophisticated and powerful analytics. You will be able to solve the

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Learning

Predictive
Analytics With R
Packt Publishing

**difficulties
relating to
performing data
analysis in
practice and find
solutions to
working with
“messy data”,
large data,
communicating
results, and
facilitating
reproducibility.**

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Learning

You will then perform key predictive analytics tasks using R, such as train and test predictive models for classification and regression tasks, score new data sets and so on. By the end of this Learning

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Learning

Predictive
Analytics With R
Packt Publishing

Path, you will have explored and tested the most popular modeling techniques in use on real-world data sets and mastered a diverse range of techniques in predictive analytics. This

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Learning

Predictive

Analytics With R

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**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: Data
Analysis with R,
Tony Fischetti
Learning**

Read Book
Learning

Predictive
**Predictive
Analytics with R,**
Eric Mayor

**Mastering
Predictive**

**Analytics with R,
Rui Miguel Forte
Style and**

**approach Learn
data analysis
using engaging
examples and fun
exercises, and**

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Learning

Predictive

**with a gentle and
friendly but**

comprehensive

"learn-by-doing"

approach. This is

a practical

course, which

analyzes

compelling data

about life, health,

and death with

the help of

tutorials. It offers

Read Book

Learning

Predictive

**you a useful way
of interpreting**

the data that's

specific to this

course, but that

can also be

applied to any

other data. This

course is

designed to be

both a guide and

a reference for

moving beyond

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Learning

Predictive

**the basics of
predictive
modeling.**

**Over the past
decade, Big Data
have become
ubiquitous in all
economic
sectors, scientific
disciplines, and
human activities.
They have led to
striking**

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Learning

Predictive

Analytics With R

Book Publishing

**technological
advances,
affecting all
human
experiences. Our
ability to
manage,
understand,
interrogate, and
interpret such
extremely large,
multisource,
heterogeneous,**

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Learning

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Analytics With R
Packt Publishing

**incomplete,
multiscale, and
incongruent data
has not kept pace
with the rapid
increase of the
volume,
complexity and
proliferation of
the deluge of
digital
information.
There are three**

Predictive
Analytics With R
Packt Publishing

**reasons for this
shortfall. First,
the volume of
data is increasing
much faster than
the
corresponding
rise of our
computational
processing power
(Kryder's law >
Moore's law).
Second,**

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Learning

Predictive
traditional
Analytics With R
discipline-bounds
Packt Publishing
inhibit

expeditious
progress. Third,
our education
and training
activities have
fallen behind the
accelerated trend
of scientific,
information, and
communication

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Learning

Predictive

Analytics With R

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**advances. There
are very few
rigorous
instructional
resources,
interactive
learning
materials, and
dynamic training
environments
that support
active data
science learning.**

Read Book
Learning

**Predictive
Analytics With R
Packt Publishing**

**The textbook
balances the
mathematical
foundations with
dexterous
demonstrations
and examples of
data, tools,
modules and
workflows that
serve as pillars
for the urgently
needed bridge to**

Read Book

Learning

Predictive

**close that supply
and demand**

predictive

analytic skills

gap. Exposing the

enormous

opportunities

presented by the

tsunami of Big

data, this

textbook aims to

identify specific

knowledge gaps,

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Learning

Predictive

Analytics With R

Rackt Publishing

**educational
barriers, and
workforce**

readiness

deficiencies.

Specifically, it

focuses on the

development of a

transdisciplinary

curriculum

integrating

modern

computational

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Learning

Predictive

Analytics With R

Backt Publishing

**methods,
advanced data
science
techniques,
innovative
biomedical
applications, and
impactful health
analytics. The
content of this
graduate-level
textbook fills a
substantial gap in**

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Learning
Predictive
Analytics With R
Packt Publishing

**integrating
modern
engineering
concepts,
computational
algorithms,
mathematical
optimization,
statistical
computing and
biomedical
inference. Big
data analytic**

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Learning

Predictive

techniques and
Analytics With R

predictive

scientific

methods demand

broad

transdisciplinary

knowledge,

appeal to an

extremely wide

spectrum of

readers/learners,

and provide

incredible

Read Book

Learning

Predictive

**opportunities for
engagement**

throughout the

academy,

industry,

regulatory and

funding agencies.

The two

examples below

demonstrate the

powerful need for

scientific

knowledge,

Read Book

Learning

Predictive

**computational
abilities,
interdisciplinary**

**expertise, and
modern**

technologies

necessary to

**achieve desired
outcomes**

(improving

human health

and optimizing

future return on

Read Book
Learning

Predictive
Analytics With R
Packt Publishing

**investment). This
can only be
achieved by
appropriately
trained teams of
researchers who
can develop
robust decision
support systems
using modern
techniques and
effective end-to-
end protocols,**

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Learning

Predictive
Analytics With R
Packt Publishing

like the ones
described in this
textbook. • A

geriatric
neurologist is
examining a
patient
complaining of
gait imbalance
and posture
instability. To
determine if the
patient may

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Learning

Predictive
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**suffer from
Parkinson's
disease, the
physician
acquires clinical,
cognitive,
phenotypic,
imaging, and
genetics data
(Big Data). Most
clinics and
healthcare
centers are not**

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Learning

Predictive

Analytics With R

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equipped with skilled data analytic teams that can wrangle, harmonize and interpret such complex datasets. A learner that completes a course of study using this textbook will

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Learning

Predictive

Analytics With R

Book Publishing

have the competency and ability to manage the data, generate a protocol for deriving biomarkers, and provide an actionable decision support system. The results of this

Predictive
Analytics With R
Packt Publishing

**protocol will help
the physician
understand the
entire patient
dataset and
assist in making
a holistic
evidence-based,
data-driven,
clinical diagnosis.**

- To improve the
return on
investment for**

Read Book

Learning

Predictive

their

shareholders, a

healthcare

manufacturer

needs to forecast

the demand for

their product

subject to

environmental,

demographic,

economic, and

bio-social

sentiment data

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Learning

Predictive

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(Big Data). The organization's data-analytics team is tasked with developing a protocol that identifies, aggregates, harmonizes, models and analyzes these heterogeneous data elements to

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Learning

Predictive
Analytics With R
Packt Publishing

**generate a trend
forecast. This
system needs to
provide an
automated,
adaptive,
scalable, and
reliable
prediction of the
optimal
investment, e.g.,
R&D allocation,
that maximizes**

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Learning

Predictive
Analytics With R
Packt Publishing

**the company's
bottom line. A
reader that
complete a
course of study
using this
textbook will be
able to ingest the
observed
structured and
unstructured
data,
mathematically**

Read Book

Learning

Predictive

Analytics With R

Packt Publishing

represent the data as a computable object, apply appropriate model-based and model-free prediction techniques. The results of these techniques may be used to forecast the

**expected relation
between the
company's
investment,
product supply,
general demand
of healthcare
(providers and
patients), and
estimate the
return on initial
investments.**

Combine

Read Book
Learning

Predictive
Analytics With R
Packt Publishing

**business sense,
statistics, and
computers in a
new and intuitive
way, thanks to
Big Data
Predictive
analytics is a
branch of data
mining that helps
predict
probabilities and
trends. Predictive**

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explores the

power of

predictive

analytics and

how you can use

it to make

valuable

predictions for

your business, or

in fields such as

advertising, fraud

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**detection,
politics, and
others. This
practical book
does not bog you
down with loads
of mathematical
or scientific
theory, but
instead helps you
quickly see how
to use the right
algorithms and**

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**tools to collect
and analyze data**

and apply it to

make predictions.

Topics include

using structured

and unstructured

data, building

models, creating

a predictive

analysis

roadmap, setting

realistic goals,

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much more.**

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mining to
discover patterns
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predictions for
tech-savvy
businesses Helps
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to shepherd**

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through their**

companies

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enough of the
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math, but also**

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and more Covers**

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analytics basics,

using structured

and unstructured

data, data

mining, and

algorithms and

techniques for

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analyzing data

Also covers

clustering,

association, and

statistical

models; creating

a predictive

analytics

roadmap; and

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predictions to the

web, marketing,

finance, health

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produce, and

protect predictive

analytics projects

through your

company with

Predictive

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Dummies.

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Analytics With R**

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concepts and
skills that can
help you tackle
real-world data
analysis
challenges. It
covers concepts
from probability,
statistical**

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inference, linear
regression, and
machine learning.

**It also helps you
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such as R
programming,
data wrangling,
data
visualization,
predictive
algorithm
building, file**

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**organization with
UNIX/Linux shell,
version control
with Git and
GitHub, and
reproducible
document
preparation. This
book is a
textbook for a
first course in
data science. No
previous**

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**knowledge of R is
necessary,
although some
experience with
programming
may be helpful.**

**The book is
divided into six
parts: R, data
visualization,
statistics with R,
data wrangling,
machine learning,**

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and productivity tools. Each part has several chapters meant to be presented as one lecture. The author uses motivating case studies that realistically mimic a data scientist's experience. He

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**Predictive
Analytics With R
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**starts by asking
specific questions
and answers
these through
data analysis so
concepts are
learned as a
means to
answering the
questions.**

**Examples of the
case studies
included are: US**

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state, self-
reported student
heights, trends in
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infectious
disease rates, the
financial crisis of
2007-2008,
election**

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baseball team,
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of hand-written

digits, and movie

recommendation

systems. The

statistical

concepts used to

answer the case

study questions

are only briefly

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**introduced, so
complementing
with a probability
and statistics
textbook is highly
recommended for
in-depth
understanding of
these concepts. If
you read and
understand the
chapters and
complete the**

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**exercises, you
will be prepared
to learn the more
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concepts and
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become an
expert.**

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Applied Analytics
through Case
Studies Using**

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modeling, and
advanced
analytics
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in R
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- A Practical

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Master the craft

of predictive

modeling in R

by developing

strategy,

intuition, and a

solid foundation

in essential

concepts About

This Book

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***Grasping the
major methods
of predictive
modeling and
moving beyond
black box
thinking to a
deeper level of
understanding
Leveraging the
flexibility and
modularity of R***

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different
techniques and
data types
Packed with
practical advice
and tips
explaining
important
concepts and
best practices***

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understand
quickly and
easily Who This
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scientists,
predictive
modelers, or
quantitative
analysts with***

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and statistics
will find this
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useful, the
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professional
wishing to
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level status ,***

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extremely
valuable.. This
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familiarity with
the
fundamentals of
R, such as the
main data
types, simple
functions, and***

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***how to move
data around.
Although no
prior experience
with machine
learning or
predictive
modeling is
required, there
are some
advanced topics
provided that***

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**will require
more than
novice**

**exposure. What
You Will Learn**

**Master the
steps involved
in the predictive
modeling**

**process Grow
your expertise
in using R and**

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***its diverse
range of
packages Learn
how to classify
predictive
models and
distinguish
which models
are suitable for
a particular
problem
Understand***

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***steps for tidying
data and***

improving the

performing

metrics

Recognize the

assumptions,

strengths, and

weaknesses of a

predictive

model

Understand how

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*and why each
predictive
model works in
R Select
appropriate
metrics to
assess the
performance of
different types
of predictive
model Explore
word*

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datasets In
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that is perfect**

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predictive
modeling
solutions. With
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growing
community and
plethora of
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offers the**

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functionality to deal with a truly vast array of problems. The book begins with a dedicated chapter on the language of models and the predictive modeling process. You

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***will understand
the learning
curve and the
process of
tidying data.***

***Each
subsequent
chapter tackles
a particular type
of model, such
as neural
networks, and***

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***focuses on the
three important
questions of
how the model
works, how to
use R to train it,
and how to
measure and
assess its
performance
using real-world
datasets. How***

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**do you train
models that can
handle really
large datasets?
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just that.**

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tackle the really
important topic
of deep learning
by**

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**embedding and
recurrent neural
networks. By
the end of this
book, you will
have explored
and tested the
most popular
modeling**

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techniques in

use on real-

world datasets

and mastered a

diverse range of

techniques in

predictive

analytics using

R. Style and

approach This

book takes a

step-by-step

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explaining the
intermediate to
advanced
concepts in
predictive
analytics. Every
concept is
explained in
depth,
supplemented
with practical*

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applicable in a
real-world
setting.**

**Leverage the
power of
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analytics and
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modeling in
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comprehensive

guide that will

bring out the

creativity in you

to visualize the

results of

complex

calculations

using Tableau

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and R Combine

Tableau

analytics and

visualization

with the power

of R using this

step-by-step

guide

Wondering how

R can be used

with Tableau?

This book is

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solution. Who
This Book Is For
This book will
appeal to
Tableau users
who want to go
beyond the
Tableau
interface and
deploy the full
potential of*

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**Tableau, by
using R to
perform**

**advanced
analytics with
Tableau. A basic
familiarity with
R is useful but
not compulsory,
as the book will
start off with
concrete**

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**examples of R
and will move
quickly into**

**more advanced
spheres of**

**analytics using
online data**

sources to

**support hands-
on learning.**

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developers who

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want to

integrate R in

Tableau will also

benefit from

this book. What

You Will Learn

Integrate

Tableau's

analytics with

the industry-

standard,

statistical

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Learning

***proven prowess of R.
Make R function
calls in Tableau,
and visualize R
functions with
Tableau using
RServe. Use the
CRISP-DM
methodology to
create a
roadmap for
analytics***

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investigations.

Implement

various

supervised and

unsupervised

learning

algorithms in R

to return values

to Tableau.

Make quick,

cogent, and

data-driven

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Learning

*decisions for
your business
using advanced
analytical
techniques such
as forecasting,
predictions,
association
rules,
clustering,
classification,
and other*

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***advanced
Tableau/R
calculated field
functions. In
Detail Tableau
and R offer
accessible
analytics by
allowing a
combination of
easy-to-use
data***

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**visualization
along with indus
try-standard,
robust**

robust

statistical

computation.

Moving from

data

visualization

into deeper,

more advanced

analytics? This

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*book will
intensify data
skills for data
viz-savvy users
who want to
move into
analytics and
data science in
order to
enhance their
businesses by
harnessing the*

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**analytical power
of R and the
stunning**

visualization

**capabilities of
Tableau.**

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come across a
wide range of
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learning
algorithms and**

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*descriptive,
prescriptive,
predictive, and
visually
appealing
analytical
solutions can be
designed with R
and Tableau. In
order to
maximize*

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learning, hands-on examples will ease the

transition from

being a data-

savvy user to a

data analyst

using sound

statistical tools

to perform

advanced

analytics. By the

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***end of this
book, you will
get to grips with
advanced
calculations in R
and Tableau for
analytics and
prediction with
the help of use
cases and hands-
on examples.
Style and***

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approach
Analytics With R
Tableau
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(uniquely)

**offers excellent
visualization
combined with
advanced
analytics; R is at
the pinnacle of
statistical
computational
languages.**

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*When you want
to move from
one view of data
to another,
backed up by
complex
computations,
the combination
of R and
Tableau makes
the perfect
solution. This*

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*example-rich
guide will teach
you how to
combine these
two to perform
advanced
analytics by
integrating
Tableau with R
and create
beautiful data
visualizations.*

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understanding.
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and the
tidyverse, a
collection of R**

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to make data
science fast,
fluent, and fun.
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programming
experience, R
for Data Science**

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*is designed to
get you doing
data science as
quickly as
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*Authors Hadley
Wickham and
Garrett*

*Grolemund
guide you
through the
steps of*

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wrangling,
exploring, and
modeling your
data and
communicating
the results.
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picture
understanding
of the data***

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to manage the
details. Each
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with exercises
to help you
practice what
you've learned
along the way.***

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to: Wrangle—tra
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datasets into a
form convenient
for analysis
Program—learn
powerful R tools
for solving data
problems with
greater clarity
and ease Explor***

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data, generate
hypotheses, and
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them***

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a low-
dimensional***

***summary that
captures true
"signals" in your
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win by
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their data more
deeply than
competitors do.***

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compete based
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Techniques in
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Analytics, the
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University's
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techniques, and
R code you need
to excel in
analytics.**

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context and
quantitative
tools, appealing
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analysts,
programmers,
and students
alike.--

A

comprehensive

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and Tableau

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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 book

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environment and
performing data ETL
in R. Data
exploration
examples are
provided that
demonstrate how
powerful data

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in discovering
hidden relationships.

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required to
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using R: descriptive
statistics and data

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classification,

association rules,

and clustering

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multiple regression,

and logistic

regression This book

includes case studies

on important

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business analytic techniques, such as classification,

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clustering, and

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language is the

statistical tool used

to demonstrate the

concepts throughout

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and draw useful
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them • Discover the
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machine learning •
Carry out predictive
modeling • Define a
business issue as an

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analytical problem
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and learn the
fundamentals of
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executives, strategy
and planning
professionals,
software

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BI/DW

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professionals.

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managers, and

analysts - people

who are involved

with advancing the

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use of BI at their
companies or who
need to better

understand what BI
is and how it can be
used to improve
profitability. It is
written from a
general management
perspective, and it
draws on
observations at 12

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companies whose annual revenues range between \$500 million and \$20 billion. Over the past 15 years, my company has formulated vendor-neutral business-focused BI strategies and program execution plans in

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collaboration with
manufacturers,
distributors,
retailers, logistics
companies, insurers,
investment
companies, credit
unions, and utilities,
among others. It is
through these
experiences that we
have validated

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business-driven BI
strategy formulation
methods and
identified common
enterprise BI
program execution
challenges. In recent
years, terms like
“big data” and “big
data analytics” have
been introduced into
the business and

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technical lexicon.
Upon close
examination, the

newer terminology is
about the same thing
that BI has always
been about:

analyzing the vast
amounts of data that
companies generate
and/or purchase in
the course of

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business as a means
of improving
profitability and
competitiveness.

Accordingly, we will
use the terms BI and
business intelligence
throughout the book,
and we will discuss
the newer concepts
like big data as
appropriate. More

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broadly, the goal of this book is to share methods and observations that will help companies achieve BI success and thereby increase revenues, reduce costs, or both. Provides ideas for improving the business

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performance of
one's company or
business functions

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step methods that
readers can readily
apply in their
companies Includes
exercises and case
studies with road-
tested advice about

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strategies and
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program plans

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analyze your data
using the world's
most powerful
statistical
programming
language About This
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different sources

Gain a deeper

understanding of

fundamentals of

applied statistics A

practical guide to

performing data

analysis in practice

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learning data

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analysis for the first
time, or you want to
deepen the

understanding you
already have, this
book will prove to
an invaluable
resource. If you are
looking for a book to
bring you all the way
through the
fundamentals to the

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application of
advanced and
effective analytics

methodologies, and

have some prior

programming

experience and a

mathematical

background, then

this is for you. What

You Will Learn

Navigate the R

Page 305/441

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environment
Describe and
visualize the

behavior of data and
relationships

between data Gain a
thorough

understanding of
statistical reasoning
and sampling

Employ hypothesis
tests to draw

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data Learn Bayesian
methods for

estimating

parameters Perform
regression to predict
continuous variables

Apply powerful
classification

methods to predict
categorical data

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multiple imputation
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problematic data
points Employ
parallelization and
Rcpp to scale your
analyses to larger
data Put best
practices into effect
to make your job
easier and facilitate

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can be found in the
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successful
enterprises. The

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express complex analytics easily, quickly, and succinctly. With over 7,000 user contributed packages, it's easy to find support for the latest and greatest

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algorithms and
techniques. Starting
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and statistical
reasoning, Data
Analysis with R
dives into advanced
predictive analytics,
showing how to
apply those
techniques to real-
world data though

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with real-world examples. Packed with engaging problems and exercises, this book begins with a review of R and its syntax. From there, get to grips with the fundamentals of applied statistics and build on this

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knowledge to

perform

sophisticated and

powerful analytics.

Solve the difficulties

relating to

performing data

analysis in practice

and find solutions to

working with

“messy data”, large

data, communicating

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results, and
facilitating
reproducibility. This
book is engineered
to be an invaluable
resource through
many stages of
anyone's career as a
data analyst. Style
and approach Learn
data analysis using
engaging examples

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and fun exercises,
and with a gentle
and friendly but
comprehensive
"learn-by-doing"
approach.

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Learning Predictive
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R for Data Science
Business Problems

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technological

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building a

scalable machine-

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learning model with big data using R. This second edition shows you how to work with a machine-learning algorithm and use it to build a ML model from raw data. You will see how to

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use R

programming

with

TensorFlow,

thus avoiding the

effort of learning

Python if you are

only comfortable

with R. As in the

first edition, the

authors have

kept the fine

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balance of theory
and application
of machine

learning through
various real-
world use-cases
which gives you
a comprehensive
collection of
topics in machine
learning. New
chapters in this

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learning. What

You'll Learn

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machine learning

algorithms using

R Master the

process of

building machine-

learning models

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Cover the
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foundations of
machine-learning
algorithms See
industry focused
real-world use
cases Tackle
time series
modeling in R
Apply deep
learning using

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Keras and
Analytics With R
TensorFlow in R
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scientists, data
science
professionals,
and researchers
in academia who
want to
understand the
nuances of

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approaches/algor
ithms in practice

using R.

Develop and run
efficient R

scripts and
predictive

models for SQL

Server 2017 Key

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how you can

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SQL Server

2017 to build
efficient, cost-
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science solutions

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Services to
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advanced

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to predictive

modeling A quick
primer with
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you get up- and-
running with SQL
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Learning

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integration /

continuous

delivery. Book

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one of the most

anticipated

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features in SQL

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improved

significantly and

rebranded as

SQL Server

2017 Machine

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Services. Prior

to SQL Server

2016, many

developers and

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data scientists
were already
using R to

connect to SQL
Server in siloed
environments
that left a lot to
be desired, in
order to do
additional data
analysis,
superseding

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SSAS Data Mining or additional CLR programming functions. With R integrated within SQL Server 2017, these developers and data scientists can now benefit from its

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integrated,
effective,
efficient, and

more

streamlined

analytics

environment.

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you foundational
knowledge and
insights to help
you understand

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SQL Server

Analytics With R

2017 Machine

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Learning

Services with R.

First and

foremost, the

book provides

practical

examples on how

to implement,

use, and

understand SQL

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Server and R
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integration in
corporate

environments,

and also

provides

explanations and

underlying

motivations. It

covers installing

Machine

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s; maintaining,
deploying, and
managing

code; and
monitoring your
services. Delving
more deeply into
predictive
modeling and the
RevoScaleR
package, this
book also

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provides insights
into
operationalizing
code and
exploring and
visualizing data.

To complete the
journey, this
book covers the
new features in
SQL Server
2017 and how

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they are

compatible with

R, amplifying

their combined

power. What you

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Services from

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configuration and

maintenance

Handle and

operationalize R

code Explore

RevoScaleR R

algorithms and

create predictive

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models Deploy,
manage, and
monitor database

solutions with R

Extend R with

SQL Server

2017 features

Explore the

power of R for

database

administrators

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for This book is
for data analysts,
data scientists,
and database
administrators
with some or no
experience in R
but who are
eager to easily
deliver practical
data science
solutions in their

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day-to-day work

(or future

projects) using

SQL Server.

Data Science and

Machine

Learning are in

high demand, as

customers are

increasingly

looking for ways

to glean insights

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from all their
data. More
customers now
realize that

Business
Intelligence is
not enough as
the volume,
speed and
complexity of
data now defy
traditional

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analytics tools.

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While Business
Intelligence

addresses

descriptive and
diagnostic

analysis, Data

Science unlocks

new

opportunities

through

predictive and

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prescriptive
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analysis. The
purpose of this
book is to
provide a gentle
and
instructionally
organized
introduction to
the field of data
science and
machine

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learning, with a
focus on building
and deploying

predictive

models. The

book also

provides a

thorough

overview of the

Microsoft Azure

Machine

Learning service

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using task
oriented
descriptions and
concrete end-to-
end examples,
sufficient to
ensure the
reader can
immediately
begin using this
important new
service. It

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describes all aspects of the service from data ingress to applying machine learning and evaluating the resulting model, to deploying the resulting model as a machine learning web

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service. Finally,

Analytics With R
this book

attempts to have

minimal

dependencies, so

that you can

fairly easily pick

and choose

chapters to read.

When

dependencies do

exist, they are

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listed at the start and end of the chapter. The simplicity of this new service from Microsoft will help to take Data Science and Machine Learning to a much broader audience than

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existing products
in this space.

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Learn how you
can quickly build
and deploy
sophisticated
predictive
models as
machine learning
web services
with the new
Azure Machine

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Learning service
from Microsoft.

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Gain practical

insights into

predictive

modelling by

implementing

Predictive

Analytics

algorithms on

public datasets

with Python

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Analytics With R
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About This Book
A step-by-step
guide to
predictive
modeling
including lots of
tips, tricks, and
best practices
Get to grips with
the basics of
Predictive
Analytics with

Read Book

Learning

Predictive

Python Learn

how to use the

popular

predictive

modeling

algorithms such

as Linear

Regression,

Decision Trees,

Logistic

Regression, and

Clustering Who

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This Book Is For
If you wish to
learn how to
implement
Predictive
Analytics
algorithms using
Python libraries,
then this is the
book for you. If
you are familiar
with coding in

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Python (or some other programming/statistical/scripting language) but have never used or read about Predictive Analytics algorithms, this book will also help you. The book will be

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beneficial to and
can be read by
any Data Science
enthusiasts.

Some familiarity
with Python will
be useful to get
the most out of
this book, but it
is certainly not a
prerequisite.

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Understand the
statistical and
mathematical

concepts behind

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Analytics

algorithms and

implement

Predictive

Analytics

algorithms using

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Python libraries

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result

parameters

arising from the

implementation

of Predictive

Analytics

algorithms Write

Python modules/

functions from

scratch to

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execute

segments or the

whole of these

algorithms

Recognize and

mitigate various

contingencies

and issues

related to the

implementation

of Predictive

Analytics

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Learning

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algorithms Get to

know various

methods of

importing,

cleaning, sub-

setting, merging,

joining,

concatenating,

exploring,

grouping, and

plotting data with

pandas and

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numpy Create
dummy datasets
and simple

mathematical

simulations using

the Python

numpy and

pandas libraries

Understand the

best practices

while handling

datasets in

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Python and
Analytics With R
creating
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predictive

models out of

them In Detail

Social Media and

the Internet of

Things have

resulted in an

avalanche of

data. Data is

powerful but not

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in its raw form -

It needs to be processed and modeled, and Python is one of the most robust tools out there to do so. It has an array of packages for predictive modeling and a

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suite of IDEs to
choose from.

Learning to
predict who
would win, lose,
buy, lie, or die
with Python is an
indispensable
skill set to have
in this data age.

This book is
your guide to

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getting started
with Predictive
Analytics using
Python. You will
see how to
process data and
make predictive
models from it.
We balance both
statistical and
mathematical
concepts, and

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implement them in Python using libraries such as pandas, scikit-learn, and numpy. You'll start by getting an understanding of the basics of predictive modeling, then you will see how

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to cleanse your
data of
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impurities and

get it ready it for

predictive

modeling. You

will also learn

more about the

best predictive

modeling

algorithms such

as Linear

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Regression,
Analytics With R
Decision Trees,
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and Logistic
Regression.

Finally, you will
see the best
practices in
predictive
modeling, as well
as the different
applications of
predictive

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modeling in the
modern world.

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Style and

approach All the

concepts in this

book been

explained and

illustrated using

a dataset, and in

a step-by-step

manner. The

Python code

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snippet to implement a method or concept is followed by the output, such as charts, dataset heads, pictures, and so on. The statistical concepts are explained in

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detail wherever
required.

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R Machine

Learning By

Example

Learning Social

Media Analytics

with R

Marketing Data

Science

From Data

Science to

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Analytics With R
Machines and
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Big Data
Modeling
Techniques in
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Analytics
A Gentle
Introduction for
Data Science
***Understand the
fundamentals of***

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**machine learning
with R and build
your own dynamic
algorithms to
tackle**

**complicated real-
world problems
successfully**

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**Get to grips with
the concepts of
machine learning
through exciting**

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Learning

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*real-world
examples*
Analytics With R
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*Visualize and
solve complex
problems by
using power-
packed R
constructs and its
robust packages
for machine
learning Learn to
build your own
machine learning*

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**system with this
example-based
practical guide**

**Who This Book Is
For If you are
interested in
mining useful
information from
data using state-
of-the-art
techniques to
make data-driven
decisions, this is**

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Learning

*a go-to guide for
you. No prior
experience with
data science is
required,
although basic
knowledge of R is
highly desirable.
Prior knowledge
in machine
learning would be
helpful but is not
necessary. What*

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***You Will Learn
Utilize the power
of R to handle
data extraction,
manipulation,
and exploration
techniques Use R
to visualize data
spread across
multiple
dimensions and
extract useful
features Explore***

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*the underlying
mathematical and
logical concepts
that drive
machine learning
algorithms Dive
deep into the
world of analytics
to predict
situations
correctly
Implement R
machine learning*

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*algorithms from
scratch and be
amazed to see the
algorithms in
action Write
reusable code
and build
complete
machine learning
systems from the
ground up Solve
interesting real-
world problems*

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Learning

*using machine
learning and R as
the journey
unfolds Harness
the power of
robust and
optimized R
packages to work
on projects that
solve real-world
problems in
machine learning
and data science*

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***In Detail Data
science and
machine learning
are some of the
top buzzwords in
the technical
world today.***

***From retail stores
to Fortune 500
companies,
everyone is
working hard to
making machine***

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*learning give
them data-driven
insights to grow
their business.*

*With powerful
data
manipulation
features, machine
learning
packages, and an
active developer
community, R
empowers users*

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*to build
sophisticated
machine learning
systems to solve
real-world data
problems. This
book takes you on
a data-driven
journey that
starts with the
very basics of R
and machine
learning and*

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gradually builds upon the concepts to work on projects that tackle real-world problems. You'll begin by getting an understanding of the core concepts and definitions required to appreciate

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*machine learning
algorithms and
concepts.*

*Building upon the
basics, you will
then work on
three different
projects to apply
the concepts of
machine
learning,
following current
trends and cover*

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*major algorithms
as well as popular
R packages in
detail. These
projects have
been neatly
divided into six
different chapters
covering the
worlds of e-
commerce,
finance, and
social-media,*

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**which are at the
very core of this
data-driven**

**revolution. Each
of the projects
will help you to
understand,
explore, visualize,
and derive
insights
depending upon
the domain and
algorithms.**

Read Book
Learning

*Through this
book, you will
learn to apply the
concepts of
machine learning
to deal with data-
related problems
and solve them
using the
powerful yet
simple language,
R. Style and
approach The*

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*book is an
enticing journey
that starts from
the very basics to
gradually pick up
pace as the story
unfolds. Each
concept is first
defined in the
larger context of
things succinctly,
followed by a
detailed*

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***explanation of
their application.***

***Each topic is
explained with
the help of a
project that
solves a real real-
world problem
involving hands-
on work thus
giving you a deep
insight into the
world of machine***

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learning.

Written as a
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tutorial to

explore and
understand the
power of R for
machine

learning. This
practical guide
that covers all of
the need to know
topics in a very
systematic way.

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For each machine learning approach, each step in the process is detailed, from preparing the data for analysis to evaluating the results. These steps will build the knowledge you need to apply

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tasks. Intended
for those who
want to learn how
to use R's
machine learning
capabilities and
gain insight from
your data.
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already know a
bit about*

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**machine
learning, but
have never used**

**R; or perhaps you
know a little R
but are new to
machine**

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either case, this
book will get you
up and running
quickly. It would
be helpful to have**

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modeling and
visualization*

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with precision
and care for
optimal business
intelligence
Restructure and
transform your
data to inform
decision-making*

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***Packed with
practical advice
and tips to help
you get to grips
with data mining
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data scientist or
R developer who
wants to explore
and optimize your
use of R's
advanced***

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features and tools, this is the book for you. A basic knowledge of R is required, along with an understanding of database logic. What You Will Learn Connect to and load data from R's range of powerful

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databases

Successfully fetch

and parse

structured and

unstructured

data Transform

and restructure

your data with

efficient R

packages Define

and build

complex

statistical models

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with glm Develop

and train

machine learning

algorithms

Visualize social

networks and

graph data

Deploy

supervised and

unsupervised

classification

algorithms

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data with R In
Detail R is an
essential
language for
sharp and
successful data
analysis. Its
numerous
features and ease
of use make it a
powerful way of
mining,*

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interpreting large
sets of data. In a
world where
understanding
big data has
become key, by
mastering R you
will be able to
deal with your
data effectively
and efficiently.
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guidance you
need to build and
develop your
knowledge and
expertise.*

*Bridging the gap
between theory
and practice, this
book will help
you to
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use data for a*

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advantage.**

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data mining and
management
tasks such as
munging,
fetching,
cleaning, and
restructuring, the
book then**

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and the core
components of
effective analysis.
You will then
discover how to
optimize your use
of machine
learning
algorithms for
classification and
recommendation*

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the traditional*

and more recent

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and approach

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and skills within

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challenges of
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gives you a
theoretical
overview before
demonstrating
how to put the
theory to work
with real-world
use cases and
hands-on***

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classical
parametric
methods of
regression and
classification
essential for
pursuing
advanced topics
in predictive
analytics and***

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broad range of
topics in
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classification
including
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regression,
logistic
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with applied
interests and by
doctoral students
who also want to
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underlying
theory. This is
done by devoting
the main body of
the text of each
chapter with*

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proofs and
extensions are
relegated to the
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section of each
chapter,
Exercises are also
divided into*

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***exercises. They
come from a
variety of
disciplines
including
business
(finance,
marketing and
sales),
economics,
education,
engineering and
sciences***

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(biological, health, physical and social). All data sets are available at the book's web site. Open source software R is used for all data analyses. R codes and outputs are provided for most examples. R

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*codes are also
available at the
book's web site.*

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Parametric
Models for
Regression and
Classification
Using R is ideal
for a one-
semester upper-
level***

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***undergraduate
and/or beginning
level graduate
course in
regression for
students in
business,
economics,
finance,
marketing,
engineering, and
computer
science. It is also***

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resource for
practitioners in
these fields.*

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Prediction*

*Algorithms with
R*

*Applied
Predictive
Modeling*

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Strategy and Big

Data Analytics

Modeling

Techniques in

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Expert

techniques for

predictive

modeling to solve

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programming
language? And
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times in your

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takes a "learn by
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and offers eight
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walkthroughs that
show you a data
analysis from start
to finish, complete
with code for you
to practice with.

The book finishes

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data science

community and
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education
professionals and

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Machine learning, at its core, is concerned with transforming data into actionable knowledge. R offers a powerful set of machine learning methods to quickly and easily gain insight from your data.

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networks — the

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learningAvoid bias

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models Evaluate
your models and
improve their perf
ormance Connect

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databases and
emerging big data
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The second
edition of a
comprehensive
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approaches used in predictive data analytics, covering both theory and practice. Machine learning is often used to build predictive models by extracting patterns from large datasets. These models are

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applications
including price
prediction, risk
assessment,
predicting
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behavior, and
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material is
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illustrate the
application of
these models in
the broader

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edition covers

recent
developments in
machine learning,
especially in a
new chapter on
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two new chapters
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unsupervised

learning and

reinforcement

learning.