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Chapter 5

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Chapter 5

Manning

Publications

This book reviews the applications, technologies, standards, and other issues related to Smart Cities. The book is

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Publications

divided into broad topical sections including Vision & Reality, Technologies & Standards, Transportation Considerations, and Infrastructure & Environment. In these sections, authors who are experts in their

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Chapter 5

fields present
essential aspects
of applications,
technologies,
requirements,
and best-

practices. In all
cases, the

authors have
direct,

substantive

experience with
the subject and

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Chapter 5

present an
important

viewpoint driven

by industry or

governmental

interests; the

authors have

each participated

in the

development

and/or

deployment of

constituent

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technologies,
standards, and
applications, and
share unique
perspectives on
key areas of the
Smart City.

Pandas has
rapidly become
one of Python's
most popular
data analysis
libraries. With

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pandas you can efficiently sort, analyze, filter and munge almost any type of data. Pandas in Action shows you how to master this versatile tool and take the next steps in your data science career.

Pandas has

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rapidly become
one of Python's
most popular

data analysis
libraries. With

pandas you can

efficiently sort,
analyze, filter and

munge almost

any type of data.

Pandas in Action

shows you how to

master this

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versatile tool and
take the next
steps in your data
science career.

Pandas in Action
makes it easy to
dive into Python-
based data
analysis. You'll
learn to use
pandas to
automate
repetitive

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Chapter 5

spreadsheet
functionality and
derive insight

from data by
sorting columns,
filtering data
subsets, and
creating multi-
leveled indices.

Each chapter is a
self-contained
tutorial, letting
you dip in when

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you need to
troubleshoot

tricky problems.

Best of all, you
won't be learning
from sterile or
randomly created
data. You'll start
with a variety of
datasets that are
big, small,
incomplete,
broken, and

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messy and learn
how to clean and
format them for
proper analysis.

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Manning
Publications.

Summary React

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Native in Action

Manning
gives iOS,

Android, and web

developers the

knowledge and

confidence they

need to begin

building high-

quality iOS and

Android apps

using the React

Native

framework.

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Publications.

About the

Technology React

Native gives

mobile and web

developers the

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power of "and."

Write your app once and easily deploy it to iOS and Android and the web. React Native apps compile into platform-specific code, reducing development time, effort, and cost! And

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because you're
using JavaScript
and the React

framework, you
benefit from a
huge ecosystem
of tools,

expertise, and
support. About
the Book React
Native in Action
teaches you to
build high-quality

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cross-platform
mobile and web
apps. In this

hands-on guide,
you'll jump right
into building a
complete app
with the help
of clear, easy-to-
follow

instructions. As
you build your
skills, you'll drill

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Manning

Publications

down to more-advanced topics like styling, APIs, animations, data architecture, and more! You'll also learn how to maximize code reuse without sacrificing native platform look-and-feel. What's

Inside Building

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cross-platform
mobile and web
apps Routing,
Redux, and
animations

Cross-
network data
requests

Storing
and retrieving
data locally

Managing data
and state About
the Reader

Written for beginn

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er-to-

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Publications

intermediate web,

Android, and iOS

developers. About

the Authors

Nader Dabit is a

developer

advocate at AWS

Mobile, where he

works on tools

and services to

allow developers

to build full-stack

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web and mobile applications using their existing

skillset. He is also the founder of

React Native

Training and the

host of the "React Native Radio"

podcast. Table of

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Getting started

with React Native

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Getting started
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Native app PART

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applications in

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styling Styling in

depth Navigation

Animations Using

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the Redux data

architecture

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Implementing

cross-platform

APIs

Implementing iOS-

specific

components and

APIs

Implementing

Android-specific

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components and

Manning
PART 4

Publications
Bringing it all

together Building

a Star Wars app

using cross-

platform

components

Far from a

monolithic block

of diehard slave

states, the

antebellum South

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Chapter 5

was, in William
Freehling's words,

"a world so lushly
various as to be a
storyteller's
dream." It was a
world where Deep
South cotton
planters clashed
with South
Carolina rice
growers, as
Northern

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egalitarianism

infiltrated border

states already

bitterly divided on

key issues. It was

the world of

Jefferson Davis,

John C. Calhoun,

Andrew Jackson,

and Thomas

Jefferson, and

also of Gullah

Jack, Nat Turner,

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and Frederick
Douglass. Now, in
the first volume

of his long
awaited,

monumental
study of the

South's road to
disunion,

historian William
Freehling offers a
sweeping political
and social history

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Chapter 5

of the antebellum

South from 1776

to 1854. All the

dramatic events

leading to

secession are

here: the Missouri

Compromise, the

Nullification

Controversy, the

Gag Rule, the

Annexation of

Texas, the

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Compromise of
1850, and the
Kansas-Nebraska

Act. Vivid

accounts of each
crisis reveal the
surprising extent
to which slavery
influenced

national politics
before 1850 and
provide important
reinterpretations

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of American
Manning
Publications
republicanism,
Jeffersonian

states' rights,

Jacksonian

democracy, and

the causes of the

American Civil

War. Freehling's

brilliant historical

insights illustrate

a work of rich

social

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observation. In the cities of the Antebellum South, in the big house of a typical plantation, we feel anew the tensions between the slaveowner and his family, poor whites and planters, the Old and New Souths,

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and most
powerfully
between slave
and master.

Freehling has evoked the Old South in all its color, cruelty, and diversity. It is a memorable portrait, certain to be a key analysis of this

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crucial era in
American history.

African American
Films Through
1959

Developing iOS
and Android apps
with JavaScript
Programming
with Types

Big data, machine
learning, and
more, using

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Manning

Parallel and High

Performance

Computing

Microservices in

Action

***Summary Deep
Learning with
Python***

***introduces the
field of deep
learning using
the Python***

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***language and the
powerful Keras
library. Written
by Keras creator
and Google AI
researcher
François Chollet,
this book builds
your
understanding
through intuitive
explanations and
practical***

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examples.

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Kindle, and ePub
formats from
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Publications.**

**About the
Technology
Machine learning
has made**

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remarkable

progress in

recent years. We

went from near-

unusable speech

and image

recognition, to

near-human

accuracy. We

went from

machines that

couldn't beat a

serious Go

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Chapter 5

player, to defeating a world champion. Behind this progress is deep learning—a combination of engineering advances, best practices, and theory that enables a wealth of previously impossible smart

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Chapter 5

applications.

About the Book

Deep Learning

with Python

introduces the

field of deep

learning using

the Python

language and the

powerful Keras

library. Written

by Keras creator

and Google AI

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Chapter 5

researcher

Manning

François Chollet,

Publications

this book builds

your

understanding

through intuitive

explanations and

practical

examples. You'll

explore

challenging

concepts and

practice with

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Chapter 5

***applications in
computer vision,
natural-language
processing, and
generative
models. By the
time you finish,
you'll have the
knowledge and
hands-on skills to
apply deep
learning in your
own projects.***

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Chapter 5

What's Inside

Deep learning

from first

principles Setting

up your own deep-

learning

environment Image

classification

models Deep

learning for text

and sequences

Neural style

transfer, text

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Chapter 5

**generation, and
image generation**

About the Reader

Readers need

intermediate

Python skills. No

previous

experience with

Keras,

TensorFlow, or

machine learning

is required.

About the Author

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Chapter 5

François Chollet works on deep learning at Google in Mountain View, CA. He is the creator of the Keras deep-learning library, as well as a contributor to the TensorFlow machine-learning

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Chapter 5

framework. He also does deep-learning research, with a focus on computer vision and the application of machine learning to formal reasoning. His papers have been published at

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Chapter 5

major

**conferences in
the field,**

including the

Conference on

Computer Vision

and Pattern

Recognition

(CVPR), the

Conference and

Workshop on

Neural

Information

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Processing

Systems (NIPS),

the International

Conference on

Learning

Representations

(ICLR), and

others. Table of

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neural networks
Getting started
with neural
networks***

***Fundamentals of
machine learning***

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PRACTICE Deep

learning for

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computer vision

Deep learning for

text and

sequences

Advanced deep-

learning best

practices

Generative deep

learning

Conclusions

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Installing Keras

and its

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***dependencies on
Ubuntu appendix
B - Running***

Jupyter

***notebooks on an
EC2 GPU instance***

***Summary Go in
Action introduces
the Go language,
guiding you from
inquisitive***

***developer to Go
guru. The book***

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Chapter 5

begins by

introducing the

unique features

and concepts of

Go. Then, you'll

get hands-on

experience

writing real-world

applications

including

websites and

network servers,

as well as

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Chapter 5

***techniques to
manipulate and
convert data at
speeds that will
make your
friends jealous.
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print book
includes a free
eBook in PDF,
Kindle, and ePub
formats from
Manning***

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Chapter 5

Publications.

About the

Technology

Application

development can

be tricky enough

even when you

aren't dealing

with complex

systems

programming

problems like

web-scale

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Chapter 5

concurrency and

real-time

performance.

While it's

possible to solve

these common

issues with

additional tools

and frameworks,

Go handles them

right out of the

box, making for a

more natural and

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Chapter 5

productive

coding

experience.

Developed at

Google, Go

powers nimble

startups as well

as big enterprise

s—companies

that rely on high-

performing

services in their

infrastructure.

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Chapter 5

About the Book

Go in Action is for

any intermediate-

level developer

who has

experience with

other

programming

languages and

wants a jump-

start in learning

Go or a more

thorough

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***understanding of
the language and
its internals. This
book provides an
intensive,
comprehensive,
and idiomatic
view of Go. It
focuses on the
specification and
implementation
of the language,
including topics***

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like language

**syntax, Go's type
system,**

concurrency,

channels, and

testing. What's

Inside Language

specification and

implementation

Go's type system

Internals of Go's

data structures

Testing and

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Chapter 5

benchmarking

About the Reader

This book

**assumes you're a
working**

developer

**proficient with
another language**

like Java, Ruby,

Python, C#, or

C++. About the

Authors William

Kennedy is a

Bookmark File

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Chapter 5

seasoned

software

developer and

author of the

blog

GoingGo.Net.

Brian Ketelsen

and Erik St.

Martin are the

organizers of

GopherCon and

coauthors of the

Go-based Skynet

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framework. Table

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Introducing Go

Go quick-start

Packaging and

tooling Arrays,

slices, and maps

Go's type system

Concurrency

Concurrency

patterns

Standard library

Testing and

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**benchmarking
Summary Online
recommender**

**systems help
users find
movies, jobs,
restaurants-even
romance! There's
an art in
combining
statistics,
demographics,
and query terms**

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Chapter 5

Manning

Publications

***to achieve results
that will delight
them. Learn to
build a
recommender
system the right
way: it can make
or break your
application!
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print book
includes a free
eBook in PDF,***

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**Kindle, and ePub
formats from
Manning**

Publications.

About the

Technology

Recommender

systems are

everywhere,

helping you find

everything from

movies to jobs,

restaurants to

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Chapter 5

***hospitals, even
romance. Using
behavioral and
demographic
data, these
systems make
predictions about
what users will
be most
interested in at a
particular time,
resulting in high-
quality, ordered,***

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Chapter 5

***personalized
suggestions.***

***Recommender
systems are
practically a
necessity for
keeping your site
content current,
useful, and
interesting to
your visitors.***

***About the Book
Practical***

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Chapter 5

**Recommender
Systems explains
how**

**recommender
systems work
and shows how to
create and apply
them for your
site. After
covering the
basics, you'll see
how to collect
user data and**

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Chapter 5

produce

personalized recommendations.

You'll learn how to use the most popular

recommendation algorithms and

see examples of them in action on sites like Amazon and Netflix.

Finally, the book

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Chapter 5

covers scaling

problems and

other issues

you'll encounter

as your site

grows. What's

inside How to

collect and

understand user

behavior

Collaborative and

content-based

filtering Machine

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Chapter 5

learning

algorithms Real-

world examples

in Python About

the Reader

Readers need

intermediate

programming and

database skills.

About the Author

Kim Falk is an

experienced data

scientist who

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Chapter 5

**works daily with
machine learning
and**

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and how to

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Monitoring the

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and how to

calculate them

Non-personalized

recommendations

The user (and

content) who

came in from the

cold PART 2 -

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ALGORITHMS

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***Finding
similarities
among users and
among content
Collaborative
filtering in the
neighborhood
Evaluating and
testing your
recommender
Content-based
filtering Finding
hidden genres***

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Chapter 5

***with matrix
factorization***

Manning

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***Taking the best
of all algorithms:
implementing
hybrid***

recommenders

Ranking and

learning to rank

Future of

recommender

systems

Building software

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Chapter 5

is harder than

ever. As a

developer, you

not only have to

chase ever-

changing

technological

trends but also

need to

understand the

business domains

behind the

software. This

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Chapter 5

practical book

provides you with

a set of core

patterns,

principles, and

practices for

analyzing

business

domains,

understanding

business

strategy, and,

most importantly,

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Chapter 5

***aligning software
design with its
business needs.***

Author Vlad

***Khononov shows
you how these
practices lead to
robust***

***implementation
of business logic
and help to
future-proof
software design***

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Chapter 5

and architecture.

You'll examine

the relationship

***between domain-
driven design***

(DDD) and other

methodologies to

ensure you make

architectural

decisions that

meet business

requirements.

You'll also

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Chapter 5

explore the real-life story of

implementing

DDD in a startup

company. With

this book, you'll

learn how to:

Analyze a

company's

business domain

to learn how the

system you're

building fits its

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Chapter 5

competitive

strategy Use

DDD's strategic

and tactical tools

to architect

effective

software

solutions that

address business

needs Build a

shared

understanding of

the business

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Chapter 5

**domains you
encounter**

**Decompose a
system into
bounded contexts**

**Coordinate the
work of multiple
teams Gradually
introduce DDD to
brownfield
projects**

Flex on Java

The New

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**Chronology of
Iron Age Gordion**

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**Secessionists at
Bay, 1776-1854**

Real-World

**Machine Learning
Using**

**Specification by
Example and**

Gherkin

The Third Edition

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of An R

Manning

Companion to

Publications

by Philip H.

Pollock III and

Barry C. Edwards

teaches your

students to

conduct political

research with R,

the open-source

programming

language and

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Chapter 5

software

Manning

environment for

Publications

statistical

computing and

graphics. This

workbook offers

the same easy-to-

use and effective

style as the other

software

companions to

the Essentials of

Political Analysis,

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tailored for R.

With this

comprehensive

workbook,

students analyze

research-quality

data to learn

descriptive

statistics, data

transformations,

bivariate analysis

(such as cross-

tabulations and

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Chapter 5

mean

comparisons),

controlled

comparisons,

correlation and

bivariate

regression,

interaction

effects, and

logistic

regression. The

clear

explanations and

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*instructions are
aided by the use
of many*

*annotated and
labeled screen
shots, as well as
QR codes linking
to demonstration
videos. The many
end-of-chapter
exercises allow
students to apply
their new skills.*

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The Third Edition includes new and revised exercises, along with new and updated datasets from the 2020 American National Election Study, an experiment dataset, and two aggregate datasets, one on

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*50 U.S. states
and one based on
countries of the
world. A new
structure helps
break up
individual
elements of
political analysis
for deeper
explanation while
an updated suite
of R functions*

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*makes using R
even easier.*

*Students will gain
valuable skills
learning to
analyze political
data in R.*

*Summary Mahout
in Action is a
hands-on
introduction to
machine learning
with Apache*

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Mahout. Following

real-world

examples, the

book presents

practical use

cases and then

illustrates how

Mahout can be

applied to solve

them. Includes a

free audio- and

video-enhanced

ebook. About the

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Chapter 5

*Technology A
computer system
that learns and
adapts as it
collects data can
be really
powerful. Mahout,
Apache's open
source machine
learning project,
captures the core
algorithms of
recommendation*

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*systems,
classification, and
clustering in*

ready-to-use,

scalable libraries.

With Mahout, you

can immediately

apply to your own

projects the

machine learning

techniques that

drive Amazon,

Netflix, and

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Chapter 5

others. About this

Book This book

covers machine

learning using

Apache Mahout.

Based on

experience with

real-world

applications, it

introduces

practical use

cases and

illustrates how

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Chapter 5

Mahout can be applied to solve them. It places particular focus on issues of scalability and how to apply these techniques against large data sets using the Apache Hadoop framework. This book is written for

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developers

familiar with Java

-- no prior

experience with

Mahout is

assumed. Owners

of a Manning

pBook purchased

anywhere in the

world can

download a free

eBook from

manning.com at

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Chapter 5

any time. They

can do so

multiple times

and in any or all

formats available

(PDF, ePub or

Kindle). To do so,

customers must

register their

printed copy on

Manning's site by

creating a user

account and then

Bookmark File

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*following
instructions*

*printed on the
pBook*

*registration insert
at the front of the
book. What's*

*Inside Use group
data to make
individual*

*recommendations
Find logical
clusters within*

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*your data Filter
and refine with on-
the-fly*

*classification Free
audio and video*

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**PART 1 RECOMME
NDATIONS**

*Introducing
recommenders*

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recommender

Manning

data Making

Publications

recommendations

Taking

recommenders to

production

Distributing

recommendation

computations

PART 2

CLUSTERING

Introduction to

clustering

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*Representing
data Clustering
algorithms in*

Mahout

*Evaluating and
improving*

clustering quality

*Taking clustering
to production*

Real-world

*applications of
clustering PART 3*

CLASSIFICATION

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Chapter 5
Introduction to

classification

Training a

classifier

*Evaluating and
tuning a classifier*

*Deploying a
classifier Case*

*study: Shop It To
Me*

*Practical Machine
Learning for Data
Analysis Using*

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Chapter 5

Python is a problem solver's guide for creating real-world intelligent systems. It provides a comprehensive approach with concepts, practices, hands-on examples, and sample code. The

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Chapter 5

book teaches readers the vital skills required to understand and solve different problems with machine learning. It teaches machine learning techniques necessary to become a successful

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Chapter 5

practitioner, through the presentation of real-world case studies in Python machine learning ecosystems. The book also focuses on building a foundation of machine learning knowledge to solve different

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Chapter 5

real-world case

studies across

various fields,

including

biomedical signal

analysis,

healthcare,

security,

economics, and

finance.

Moreover, it

covers a wide

range of machine

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Chapter 5

*learning models,
including*

regression,

classification, and

forecasting. The

goal of the book

is to help a broad

range of readers,

including IT

professionals,

analysts,

developers, data

scientists,

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engineers, and

graduate

students, to solve

their own real-

world problems.

Offers a

comprehensive

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machine learning

tools in data

analysis across a

wide range of

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subject areas

Teaches readers

how to apply

machine learning

techniques to

biomedical

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healthcare data

Explores

important

classification and

regression

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*algorithms as well
as other machine
learning*

techniques

*Explains how to
use Python to
handle data*

*extraction,
manipulation, and
exploration*

*techniques, as
well as how to
visualize data*

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*spread across
multiple*

*dimensions and
extract useful
features*

*Data-intensive
systems are a
technological
building block
supporting Big
Data and Data
Science*

applications. This

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*book familiarizes
readers with core
concepts that*

they should be

aware of before

continuing with

independent work

and the more

advanced

technical

reference

literature that

dominates the

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current

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landscape. The

material in the

book is structured

following a

problem-based

approach. This

means that the

content in the

chapters is

focused on

developing

solutions to

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simplified, but

still realistic

problems using

data-intensive

technologies and

approaches. The

reader follows

one reference

scenario through

the whole book,

that uses an open

Apache dataset.

The origins of this

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volume are in lectures from a master's course in Data-intensive Systems, given at the University of Stavanger. Some chapters were also a base for guest lectures at Purdue University and Lodz

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*An illustrated
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*programmers and
other curious
people*

*C++ Concurrency
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*Applications,
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Standards, and
Driving Factors
Spark in Action,*

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Deep Learning

with Python

Hydraulic Design

Series

Type-related

failures are

common and can

be very costly.

Famously, in 1999,

NASA's Mars

Climate Orbiter

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*burned up in the
atmosphere
because of an*

*error that could
have easily been
prevented with*

*typing. By taking
advantage of the
strong type*

*systems available
in most modern
programming*

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languages, you

can eliminate

whole classes of

errors.

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Types teaches you

type system

techniques for

writing software

that's safe, correct,

easy to test and

maintain, and that

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practically

documents itself.

Master these

techniques, and

you may even help

prevent an

interstellar

catastrophe!

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*ePub formats from
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Spark distributed
data processing
platform provides
an easy-to-
implement tool for
ingesting,
streaming, and
processing data*

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from any source.

In Spark in Action,

Second Edition,

you'll learn to take

advantage of

Spark's core

features and

incredible

processing speed,

with applications

including real-time

computation,

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delayed

evaluation, and

machine learning.

Spark skills are a

hot commodity in

enterprises

worldwide, and

with Spark's

powerful and

flexible Java APIs,

you can reap all

the benefits

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without first

learning Scala or

Hadoop. Purchase

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technology

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Analyzing

enterprise data

starts by reading,

filtering, and

merging files and

streams from

many sources. The

Spark data

processing engine

handles this varied

volume like a

champ, delivering

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*speeds 100 times
faster than
Hadoop systems.*

*Thanks to SQL
support, an
intuitive interface,
and a
straightforward
multilanguage API,
you can use Spark
without learning a
complex new*

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ecosystem. About the book Spark in Action, Second Edition, teaches you to create end-to-end analytics applications. In this entirely new book, you'll learn from interesting Java-based examples,

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*including a
complete data
pipeline for*

*processing NASA
satellite data. And
you'll discover*

*Java, Python, and
Scala code*

*samples hosted on
GitHub that you
can explore and
adapt, plus*

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*appendixes that
give you a cheat
sheet for installing
tools and
understanding
Spark-specific
terms. What's
inside Writing
Spark applications
in Java Spark
application
architecture*

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*Ingestion through
files, databases,
streaming, and
Elasticsearch*

Querying

distributed

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book does not

assume previous

experience with

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*Spark, Scala, or
Hadoop. About the
author Jean-*

*Georges Perrin is
an experienced
data and software
architect. He is
France's first IBM
Champion and has
been honored for
12 consecutive
years. Table of*

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*Exploring
deployment*

*All films with a
predominantly or
entirely African
American cast or
that were about
African Americans
are detailed here.*

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Each entry includes cast and credits, year of release, studio, distributor, type of film (feature, short or documentary) and other production details. In most cases, a brief synopsis of the film or

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*contemporary
reviews of it follow.*

*In the appendices,
film credits for over
1,850 actors and
actresses are
provided, along
with a listing of film
companies.*

*Unlike many Flex
books that
presume readers*

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*want to develop
applications from
scratch, Flex on*

Java is for

developers in the

real world-where

Flex is one more

technology being

added to existing

systems

developed in Java,

and where

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integration is the

key indicator of

success. Written

for Java

developers

beginning to use

Flex, Flex on Java

shows how to use

Flex alongside

existing Java

applications, and

how to integrate

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*Flex using familiar
server-side
technologies such
as Spring, EJBs,
JMS, and more.*

*The authors, both
Agile development
experts, focus on
Agile and test-
driven
development to
enable readers to*

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redesign

*applications that
deliver more value
and with zero
defects.*

*Throughout the
book, readers will
apply these
techniques to
refactoring a single
application into a
rich internet*

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application using

Flex and the

BlazeDS

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*Principles and
Fundamentals*

*using Hadoop and
Spark*

*How and when to
refactor*

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*Lambdas, streams,
functional and
reactive*

programming

*An R Companion
to Political*

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Action teaches
you the theory
and skills you
need to*

effectively

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data systems

distribute

datasets across

clusters of

machines, making

it a challenge

to efficiently

query, stream,

and interpret

them. Spark can

help. It is a

processing

system designed

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specifically for

distributed

data. It

provides easy-to-

use interfaces,

along with the

performance you

need for product

ion-quality

analytics and

machine

learning. Spark

2 also adds

improved

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programming

APIs, better

performance, and

countless other

upgrades. About

the Book Spark

in Action

teaches you the

theory and

skills you need

to effectively

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streaming data

using Spark.

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using Spark SQL,

process near-

real-time

streaming data,

apply machine

learning

algorithms, and

munge graph data

using Spark

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zero-effort

startup, you can

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preconfigured

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*virtual machine
ready for you to
try the book's
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Inside Updated
for Spark 2.0
Real-life case
studies Spark
DevOps with
Docker Examples
in Scala, and
online in Java
and Python About
the Reader*

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*Written for
experienced
programmers with
some background
in big data or
machine*

*learning. About
the Authors*

*Petar Ze?evi?
and Marko Bona?i
are seasoned
developers*

*heavily involved
in the Spark*

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Streaming

Getting smart

with MLlib ML:

classification

and clustering

Connecting the

dots with GraphX

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a Spark

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cluster Running

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Mesos PART 4 -

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TOGETHER Case

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dashboard Deep

learning on

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is an in-depth

guide to writing

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batch

applications

using Spring

Batch. Written

for developers

who have basic

knowledge of

Java and the

Spring

lightweight

container, the

book provides

both a best-

practices

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*approach to
writing batch
jobs and*

*comprehensive
coverage of the
Spring Batch
framework. About
the Technology
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running batch
jobs is a common
task, there's no
standard way to
write them.*

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uses Spring's

familiar

programming

model to

simplify

configuration

and

implementation,

so it'll be

comfortably

familiar to most

Java developers.

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Action is a thorough, in-depth guide to writing efficient batch applications. Starting with the basics, it discusses the best practices of batch jobs along with details of the Spring Batch

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framework.

You'll learn by

working through

dozens of

practical,

reusable

examples in key

areas like

monitoring,

tuning,

enterprise

integration, and

automated

testing. No

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prior batch

programming

experience is

required. Basic

knowledge of

Java and Spring

is assumed.

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available is all

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the ground up

Implementing

data components

Handling errors

during batch

processing

Automating

tedious tasks

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bulletproof jobs
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*Enterprise
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to discover

matches on socia

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your favorite

news group. How

to select topics

of interest from

shared

bookmarks. How

to leverage user

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categorize

emails based on
their content.

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that do targeted
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example-driven

blueprint for

creating

applications

that collect,

analyze, and act

on the massive

quantities of

data users leave

in their wake as

they use the

web. You'll

learn how to

build Amazon-

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*and Netflix-
style*

Mapping

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*recommendation
engines, and how
the same
techniques apply
to people
matches on socia
l-networking
sites. See how
click-trace
analysis can
result in
smarter ad*

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rotations. With

a plethora of

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detail, this

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2.0 applications

that are as

smart as your

users.

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you how to

accomplish the

fundamental

tasks that

occupy data

scientists.

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common Python

libraries,

you'll

experience

firsthand the

challenges of

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data at scale*

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data science.*

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career as a data

scientist can

seem

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you get started.

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Introduci

ng Data Science

explains vital

data science

concepts and

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teaches you how

to accomplish

the fundamental

tasks that

occupy data

scientists.

You'll explore

data

visualization,

graph databases,

the use of

NoSQL, and the

data science

process. You'll

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use the Python language and common Python libraries as you experience firsthand the challenges of dealing with data at scale. Discover how Python allows you to gain insights from data sets so big

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to be stored on
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machines, or
from data moving
so quickly that
no single
machine can
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hands-on
experience with
the most popular
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*book assumes
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language, such as C, Ruby, or JavaScript. No prior experience with data science is required. About the Authors Davy Cielen, Arno D. B. Meysman, and Mohamed Ali are the founders and managing partners of

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Maiton, where

they focus on

developing data

science projects

and solutions in

various sectors.

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*Handling large
data on a single
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graph databases*

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*Text mining and
text analytics*

*Visualization to
the end user*

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**Spring Batch in
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concurrency

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makes them go

even faster. C++

17 delivers

strong support

for the

multithreaded,

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programming

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processing,

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other performanc

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tasks. This

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patterns, and

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to writing

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multithreaded

applications in

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C++ 17, it

carefully

addresses every

aspect of

concurrent

development,

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*from starting
new threads to
designing fully
functional
multithreaded
algorithms and
data structures.*

*Concurrency
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Williams*

*presents
examples and
practical tasks
in every*

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chapter,

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insights that

will delight

even the most

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developer.

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features

Starting and

managing threads

Synchronizing

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*concurrent
operations*

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Debugging

multithreaded

applications

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intermediate C

and C++

developers. No

prior experience

with concurrency

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required. About

the Author

Anthony Williams

has been an

active member of

the BSI C++

Panel since 2001

and is the

developer of the

just::thread Pro

extensions to

the C++ 11

thread library.

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based concurrent

data structures

Designing lock-

free concurrent

data structures

Designing

concurrent code

Advanced thread

management

Parallel

algorithms

Testing and

debugging

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Code teaches

refactoring

that's focused

on concrete

rules and

getting any

method down to

five lines or

less! There's no

jargon or tricky

automated-

testing skills

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easy guidelines
and patterns*

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code Improving*

code safely,

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optimization and

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enables change-

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that needs no
comments. Real-
world practices
for great
refactoring.
Improving
existing code—re-
factoring—is one
of the most
common tasks
you'll face as a
programmer. Five
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teaches you

clear and

actionable

refactoring

rules that you

can apply

without relying

on intuitive

judgements such

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smells.”

Following the

author’s expert

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refactoring and

code smells can

be learned by

following a

concrete set of

principles—you'l

l learn when to

refactor your

code, what

patterns to

apply to what

problem, and the

code

characteristics

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inefficiencies
that you need to
find and fix.*

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right way, and
your code
becomes elegant,
easy to read,
and easy to
maintain. In
this book,
you'll learn a
unique approach*

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it's quicker to
hammer out code
and fix it
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all skill
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learning
concrete rules
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method down to

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refactor,

specific

refactoring

patterns that

apply to most

common problems,

and

characteristics

of code that

should be

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altogether.

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even when you

don't understand

it Balancing

optimization and

code generality

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developers of
all skill

levels. Examples

use easy-to-read

Typescript, in

the same style

as Java and C#.

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Christian

Clausen works as

a Technical

Agile Coach,

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Wrapping up

The New

Chronology of

Iron Age Gordion

argues that the

history and

archaeology of

the site of

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*Gordion, in
central Turkey,
have been*

misunderstood

since the

beginning of its

excavation in

the 1950s. The

first excavation

director, Rodney

Young, found

evidence for

substantial

destruction

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*during the first
decade of*

*fieldwork; this
was interpreted*

as proof that

*Gordion had been
destroyed ca.*

700 B.C. by the

Kimmerians, a

group of

invaders from

the

Caucasus/Black

Sea region, as

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attested in several ancient literary sources. During the last decade, however, renewed research on the archaeological evidence, within, above, and below the destruction level indicated that the

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*catastrophe that
destroyed much
of Gordion*

*occurred 100
years earlier,
in 800 B.C., and
was the result
of a fire that
quickly got out
of control
rather than a
foreign
invasion. This
discovery*

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requires a
reassessment of
Anatolian

history during
the entire first
millennium B.C.
and has serious
implications for
our
understanding of
the surrounding
regions, such as
Assyria, Syria,
Greece, and

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Urartu, among others. The New Chronology of Iron Age Gordion is the product of a multidisciplinary research program, with dendrochronology and radiocarbon dating working hand in hand with textual and artifact

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analysis, each of which is treated in a separate chapter in this volume.

All of these categories of evidence point to the same conclusion and demonstrate that we need to look at Gordion, and much of the

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ancient Near

East, in a

completely new

way. University

Museum

Monograph, 133

Throughout its

hundred-year

history, the

game Jetan has

influenced many

writers and game

designers.

Invented by

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author Edgar

Rice Burroughs

for his 1922

novel The

Chessmen of

Mars, Jetan has

been played by

enthusiastic

fans and serious

gamers alike.

This first-ever

book on Jetan

explores the

game's rules in

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*depth and
provides new
interpretations
based on up-to-
date research.*

*It chronicles
the game's
history,
explores tactics
and variants and
provides a
complete
standard for
notating games.*

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Publications

*Also included
are three
annotated Jetan
playthroughs and
several practice
exercises. Over
80 diagrams and
photographs are
used as
illustrations,
and an essay
about Edgar Rice
Burroughs'
lifelong*

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*interest in
sports and games
further*

*contextualizes
the game.*

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Evidence and the

Therapeutic

Community

A Culture of

Enquiry

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Serverless

machine learning

with AWS

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book about building

and deploying

microservice-based

applications. Written

for developers and

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development, it

tackles the
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improving
infrastructure, and
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easier to write,
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than traditional

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enterprise
applications

because they're built

as a system of

independent

components. Master

a few important new

patterns and

processes, and

you'll be ready to

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and run production-

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maintain

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day development in

mind, this

informative guide

immerses you in

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real-world use
cases from design
to deployment.

You'll discover how
microservices
enable an efficient
continuous delivery
pipeline, and
explore examples
using Kubernetes,
Docker, and Google
Container Engine.

What's inside An

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a delivery pipeline

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designing multi-

service transactions

and queries

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containers

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microservices About

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for intermediate
developers familiar
with enterprise

architecture and
cloud platforms like
AWS and GCP.

About the Author

Morgan Bruce and
Paulo A. Pereira are
experienced
engineering leaders.

They work daily with
microservices in a

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production

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environment, using
the techniques

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traces to understand

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microservice teams

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programming with

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and structure.

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language by
exploring numerous

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programming

concepts and

techniques. You'll

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computers work

under the hood.

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playing with

persistent storage,

memory, networking

and even tinkering

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with CPU

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book takes you

through using Rust

to extend other

applications and

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discover parallel

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requiring

concurrency, Rust
programs are

compact, readable,
and blazingly fast.

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famously smart
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programming and discover awesome techniques for parallelism and concurrency. Along the way, you'll master Rust's unique borrow checker model for memory management without a garbage collector. What's

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graphical and

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previous experience
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About the author

Tim McNamara

uses Rust to build

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pipelines and

generative art. He is

an expert in natural

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processing and data

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a strong dev

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examples, you'll get
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with Unity's intuitive
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exposes every
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dev process, from
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groundwork to
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includes a new
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2D platformers with

Unity's expanded
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internet About the

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know C# or a similar

language. No game

development

knowledge is

assumed. About the

Author Joe Hocking

is a software

engineer and Unity

expert specializing

in interactive media

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internet Playing

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experience with
electronics required.

About the Author

Lyza Danger

Gardner has been a
web developer for
over 20 years. She's
part of the
NodeBots
community and a
contributor to the
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Spark. Mario Fusco

is a senior software

engineer at Red

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a University of

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computer science

professor; he

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maintain your own
powerful ML
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assumed. Readers
should know

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Fetherolf are

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display advertising

The design of a

highway drainage

channel to carry a

given discharge is

accomplished in two

parts. The first part

of the design

involves the

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computation of a
channel section

which will carry the
design discharge on
the available slope.

This chapter briefly
discusses the
principles of flow in
open channels and
the use of the

Manning equation
for computing the
channel capacity.

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The second part of the design is the determination of the degree of protection required to prevent erosion in the drainage channel.

This can be done by computing the velocity in the channel at the design discharge, using the Manning

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equation, and
comparing the

calculated velocity

with that permissible

for the type of

channel lining used.

A change in the type

of channel lining will

require a change in

channel size unless

both linings have

the same roughness

coefficient.

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About the author Robert
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Robey works at Los
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About the Author

Aditya Bhargava is a

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About the author

Peter Elger and Eóin

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CEO/CTO of

fourTheorem, a

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