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Apache Spark Book Pdf Soup

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JORDON MALONE

Apache Spark for Data Science Cookbook Packt Publishing Ltd
Apache Spark is amazing when everything clicks. But if you haven't seen the performance improvements you expected, or still don't feel confident enough to use Spark in production, this practical book is for you. Authors Holden Karau and Rachel Warren demonstrate performance optimizations to help your Spark queries run faster and handle larger data sizes, while using fewer resources. Ideal for software engineers, data engineers, developers, and system administrators working with large-scale data applications, this book describes techniques that can reduce data infrastructure costs and developer hours. Not only will you gain a more comprehensive understanding of Spark, you'll also learn how to make it sing. With this book, you'll explore: How Spark SQL's new interfaces improve performance over SQL's RDD data structure The choice between data joins in Core Spark and Spark SQL Techniques for getting the most out of standard RDD transformations How to work around performance issues in

Spark's key/value pair paradigm Writing high-performance Spark code without Scala or the JVM How to test for functionality and performance when applying suggested improvements Using Spark MLlib and Spark ML machine learning libraries Spark's Streaming components and external community packages Apache Spark 2.x Machine Learning Cookbook "O'Reilly Media, Inc."

Simplify machine learning model implementations with Spark About This Book Solve the day-to-day problems of data science with Spark This unique cookbook consists of exciting and intuitive numerical recipes Optimize your work by acquiring, cleaning, analyzing, predicting, and visualizing your data Who This Book Is For This book is for Scala developers with a fairly good exposure to and understanding of machine learning techniques, but lack practical implementations with Spark. A solid knowledge of machine learning algorithms is assumed, as well as hands-on experience of implementing ML algorithms with Scala. However, you do not need to be acquainted with the Spark ML libraries and ecosystem. What You Will Learn Get to know how Scala and Spark go hand-in-hand for developers when developing ML

systems with Spark Build a recommendation engine that scales with Spark Find out how to build unsupervised clustering systems to classify data in Spark Build machine learning systems with the Decision Tree and Ensemble models in Spark Deal with the curse of high-dimensionality in big data using Spark Implement Text analytics for Search Engines in Spark Streaming Machine Learning System implementation using Spark In Detail Machine learning aims to extract knowledge from data, relying on fundamental concepts in computer science, statistics, probability, and optimization. Learning about algorithms enables a wide range of applications, from everyday tasks such as product recommendations and spam filtering to cutting edge applications such as self-driving cars and personalized medicine. You will gain hands-on experience of applying these principles using Apache Spark, a resilient cluster computing system well suited for large-scale machine learning tasks. This book begins with a quick overview of setting up the necessary IDEs to facilitate the execution of code examples that will be covered in various chapters. It also highlights some key issues developers face while working with machine learning algorithms on the Spark platform. We progress by uncovering the various Spark APIs and the implementation of ML algorithms with developing classification systems, recommendation engines, text analytics, clustering, and learning systems. Toward the final chapters, we'll focus on building high-end applications and explain various unsupervised methodologies and challenges to tackle when implementing with big data ML systems. Style and approach This book is packed with intuitive recipes supported with line-by-line explanations to help you understand how to optimize your work flow and resolve

problems when working with complex data modeling tasks and predictive algorithms. This is a valuable resource for data scientists and those working on large scale data projects.

Mastering Apache Spark Packt Publishing Ltd

A solution-based guide to put your deep learning models into production with the power of Apache Spark Key Features Discover practical recipes for distributed deep learning with Apache Spark Learn to use libraries such as Keras and TensorFlow Solve problems in order to train your deep learning models on Apache Spark Book Description With deep learning gaining rapid mainstream adoption in modern-day industries, organizations are looking for ways to unite popular big data tools with highly efficient deep learning libraries. As a result, this will help deep learning models train with higher efficiency and speed. With the help of the Apache Spark Deep Learning Cookbook, you'll work through specific recipes to generate outcomes for deep learning algorithms, without getting bogged down in theory. From setting up Apache Spark for deep learning to implementing types of neural net, this book tackles both common and not so common problems to perform deep learning on a distributed environment. In addition to this, you'll get access to deep learning code within Spark that can be reused to answer similar problems or tweaked to answer slightly different problems. You will also learn how to stream and cluster your data with Spark. Once you have got to grips with the basics, you'll explore how to implement and deploy deep learning models, such as Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN) in Spark, using popular libraries such as TensorFlow and Keras. By the end of the book, you'll have the

expertise to train and deploy efficient deep learning models on Apache Spark. What you will learn Set up a fully functional Spark environment Understand practical machine learning and deep learning concepts Apply built-in machine learning libraries within Spark Explore libraries that are compatible with TensorFlow and Keras Explore NLP models such as Word2vec and TF-IDF on Spark Organize dataframes for deep learning evaluation Apply testing and training modeling to ensure accuracy Access readily available code that may be reusable Who this book is for If you're looking for a practical and highly useful resource for implementing efficiently distributed deep learning models with Apache Spark, then the Apache Spark Deep Learning Cookbook is for you. Knowledge of the core machine learning concepts and a basic understanding of the Apache Spark framework is required to get the best out of this book. Additionally, some programming knowledge in Python is a plus.

PySpark Cookbook Apress

Build efficient data flow and machine learning programs with this flexible, multi-functional open-source cluster-computing framework Key Features Master the art of real-time big data processing and machine learning Explore a wide range of use-cases to analyze large data Discover ways to optimize your work by using many features of Spark 2.x and Scala Book Description Apache Spark is an in-memory, cluster-based data processing system that provides a wide range of functionalities such as big data processing, analytics, machine learning, and more. With this Learning Path, you can take your knowledge of Apache Spark to the next level by learning how to expand Spark's functionality and building your own data flow and machine learning programs

on this platform. You will work with the different modules in Apache Spark, such as interactive querying with Spark SQL, using DataFrames and datasets, implementing streaming analytics with Spark Streaming, and applying machine learning and deep learning techniques on Spark using MLlib and various external tools. By the end of this elaborately designed Learning Path, you will have all the knowledge you need to master Apache Spark, and build your own big data processing and analytics pipeline quickly and without any hassle. This Learning Path includes content from the following Packt products: Mastering Apache Spark 2.x by Romeo Kienzler Scala and Spark for Big Data Analytics by Md. Rezaul Karim, Sridhar Alla Apache Spark 2.x Machine Learning Cookbook by Siamak Amirghodsi, Meenakshi Rajendran, Broderick Hall, Shuen Mei Cookbook What you will learn Get to grips with all the features of Apache Spark 2.x Perform highly optimized real-time big data processing Use ML and DL techniques with Spark MLlib and third-party tools Analyze structured and unstructured data using SparkSQL and GraphX Understand tuning, debugging, and monitoring of big data applications Build scalable and fault-tolerant streaming applications Develop scalable recommendation engines Who this book is for If you are an intermediate-level Spark developer looking to master the advanced capabilities and use-cases of Apache Spark 2.x, this Learning Path is ideal for you. Big data professionals who want to learn how to integrate and use the features of Apache Spark and build a strong big data pipeline will also find this Learning Path useful. To grasp the concepts explained in this Learning Path, you must know the fundamentals of Apache Spark and Scala.

Hands-On Machine Learning Recommender Systems with Apache Spark Simon and Schuster

Take a journey toward discovering, learning, and using Apache Spark 3.0. In this book, you will gain expertise on the powerful and efficient distributed data processing engine inside of Apache Spark; its user-friendly, comprehensive, and flexible programming model for processing data in batch and streaming; and the scalable machine learning algorithms and practical utilities to build machine learning applications. Beginning Apache Spark 3 begins by explaining different ways of interacting with Apache Spark, such as Spark Concepts and Architecture, and Spark Unified Stack. Next, it offers an overview of Spark SQL before moving on to its advanced features. It covers tips and techniques for dealing with performance issues, followed by an overview of the structured streaming processing engine. It concludes with a demonstration of how to develop machine learning applications using Spark MLlib and how to manage the machine learning development lifecycle. This book is packed with practical examples and code snippets to help you master concepts and features immediately after they are covered in each section. After reading this book, you will have the knowledge required to build your own big data pipelines, applications, and machine learning applications. You will: Master the Spark unified data analytics engine and its various components Work in tandem to provide a scalable, fault tolerant and performant data processing engine Leverage the user-friendly and flexible programming model to perform simple to complex data analytics using dataframe and Spark SQL Develop machine learning applications using Spark MLlib Manage the

machine learning development lifecycle using MLflow. [Apache Spark 2.x Cookbook](#) Sams Publishing Leverage Apache Spark within a modern data engineering ecosystem. This hands-on guide will teach you how to write fully functional applications, follow industry best practices, and learn the rationale behind these decisions. With Apache Spark as the foundation, you will follow a step-by-step journey beginning with the basics of data ingestion, processing, and transformation, and ending up with an entire local data platform running Apache Spark, Apache Zeppelin, Apache Kafka, Redis, MySQL, Minio (S3), and Apache Airflow. Apache Spark applications solve a wide range of data problems from traditional data loading and processing to rich SQL-based analysis as well as complex machine learning workloads and even near real-time processing of streaming data. Spark fits well as a central foundation for any data engineering workload. This book will teach you to write interactive Spark applications using Apache Zeppelin notebooks, write and compile reusable applications and modules, and fully test both batch and streaming. You will also learn to containerize your applications using Docker and run and deploy your Spark applications using a variety of tools such as Apache Airflow, Docker and Kubernetes. Reading this book will empower you to take advantage of Apache Spark to optimize your data pipelines and teach you to craft modular and testable Spark applications. You will create and deploy mission-critical streaming spark applications in a low-stress environment that paves the way for your own path to production. What You Will Learn Simplify data transformation with Spark Pipelines and Spark SQL Bridge data engineering with machine learning Architect modular data

pipeline applications Build reusable application components and libraries Containerize your Spark applications for consistency and reliability Use Docker and Kubernetes to deploy your Spark applications Speed up application experimentation using Apache Zeppelin and Docker Understand serializable structured data and data contracts Harness effective strategies for optimizing data in your data lakes Build end-to-end Spark structured streaming applications using Redis and Apache Kafka Embrace testing for your batch and streaming applications Deploy and monitor your Spark applications.

Big Data Analytics Packt Publishing Ltd

Learn how to use, deploy, and maintain Apache Spark with this comprehensive guide, written by the creators of the open-source cluster-computing framework. With an emphasis on improvements and new features in Spark 2.0, authors Bill Chambers and Matei Zaharia break down Spark topics into distinct sections, each with unique goals. You'll explore the basic operations and common functions of Spark's structured APIs, as well as Structured Streaming, a new high-level API for building end-to-end streaming applications. Developers and system administrators will learn the fundamentals of monitoring, tuning, and debugging Spark, and explore machine learning techniques and scenarios for employing MLlib, Spark's scalable machine-learning library. Get a gentle overview of big data and Spark Learn about DataFrames, SQL, and Datasets's core APIs through worked examples Dive into Spark's low-level APIs, RDDs, and execution of SQL and DataFrames Understand how Spark runs on a cluster Debug, monitor, and tune Spark clusters and applications Learn the power of

Structured Streaming, Spark's stream-processing engine Learn how you can apply MLlib to a variety of problems, including classification or recommendation

Beginning Apache Spark 2 Apress

A handy reference guide for data analysts and data scientists to help to obtain value from big data analytics using Spark on Hadoop clusters About This Book This book is based on the latest 2.0 version of Apache Spark and 2.7 version of Hadoop integrated with most commonly used tools. Learn all Spark stack components including latest topics such as DataFrames, DataSets, GraphFrames, Structured Streaming, DataFrame based ML Pipelines and SparkR. Integrations with frameworks such as HDFS, YARN and tools such as Jupyter, Zeppelin, NiFi, Mahout, HBase Spark Connector, GraphFrames, H2O and Hivemall. Who This Book Is For Though this book is primarily aimed at data analysts and data scientists, it will also help architects, programmers, and practitioners. Knowledge of either Spark or Hadoop would be beneficial. It is assumed that you have basic programming background in Scala, Python, SQL, or R programming with basic Linux experience. Working experience within big data environments is not mandatory. What You Will Learn Find out and implement the tools and techniques of big data analytics using Spark on Hadoop clusters with wide variety of tools used with Spark and Hadoop Understand all the Hadoop and Spark ecosystem components Get to know all the Spark components: Spark Core, Spark SQL, DataFrames, DataSets, Conventional and Structured Streaming, MLlib, ML Pipelines and Graphx See batch and real-time data analytics using Spark Core, Spark SQL, and Conventional and Structured Streaming Get to

grips with data science and machine learning using MLLib, ML Pipelines, H2O, Hivemall, Graphx, SparkR and Hivemall. In Detail Big Data Analytics book aims at providing the fundamentals of Apache Spark and Hadoop. All Spark components – Spark Core, Spark SQL, DataFrames, Data sets, Conventional Streaming, Structured Streaming, MLLib, Graphx and Hadoop core components – HDFS, MapReduce and Yarn are explored in greater depth with implementation examples on Spark + Hadoop clusters. It is moving away from MapReduce to Spark. So, advantages of Spark over MapReduce are explained at great depth to reap benefits of in-memory speeds. DataFrames API, Data Sources API and new Data set API are explained for building Big Data analytical applications. Real-time data analytics using Spark Streaming with Apache Kafka and HBase is covered to help building streaming applications. New Structured streaming concept is explained with an IOT (Internet of Things) use case. Machine learning techniques are covered using MLLib, ML Pipelines and SparkR and Graph Analytics are covered with GraphX and GraphFrames components of Spark. Readers will also get an opportunity to get started with web based notebooks such as Jupyter, Apache Zeppelin and data flow tool Apache NiFi to analyze and visualize data. Style and approach This step-by-step pragmatic guide will make life easy no matter what your level of experience. You will deep dive into Apache Spark on Hadoop clusters through ample exciting real-life examples. Practical tutorial explains data science in simple terms to help programmers and data analysts get started with Data Science *Apache Spark 2.x for Java Developers* Packt Publishing Ltd Backpacker brings the outdoors straight to the reader's doorstep,

inspiring and enabling them to go more places and enjoy nature more often. The authority on active adventure, Backpacker is the world's first GPS-enabled magazine, and the only magazine whose editors personally test the hiking trails, camping gear, and survival tips they publish. Backpacker's Editors' Choice Awards, an industry honor recognizing design, feature and product innovation, has become the gold standard against which all other outdoor-industry awards are measured.

Apache Spark 2: Data Processing and Real-Time Analytics
Packt Publishing Ltd

"The 160-page illustrated exhibition catalogue Alexey Brodovitch: Astonish Me is published by the Barnes Foundation in association with Yale University Press. Edited by curator Katy Wan and including essays from Vince Aletti, David Company, and Wan, the book gives particular attention to his pivotal relationships with photographers.. The authors address Brodovitch's impact on photography as an artistic medium in the mid-20th century and explore how European art and design became the foundation of a new American print culture. Brodovitch's own work is illuminated through his personal projects—such as the magazine Portfolio and the photographic project Ballet, which depicted performances of the itinerant Ballets Russes de Monte Carlo in the United States. Case studies of his transformative collaborations with photographers such as Eve Arnold, Richard Avedon, Irving Penn, Lisette Model, Henri Cartier-Bresson, Hans Namuth, and André Kertész reveal pivotal encounters that may surprise even the most ardent photography aficionado."--Barnes Foundation website.

Beginning Apache Spark 3 Packt Publishing Ltd

Speed up the design and implementation of deep learning solutions using Apache Spark Key Features Explore the world of distributed deep learning with Apache Spark Train neural networks with deep learning libraries such as BigDL and TensorFlow Develop Spark deep learning applications to intelligently handle large and complex datasets Book Description Deep learning is a subset of machine learning where datasets with several layers of complexity can be processed. Hands-On Deep Learning with Apache Spark addresses the sheer complexity of technical and analytical parts and the speed at which deep learning solutions can be implemented on Apache Spark. The book starts with the fundamentals of Apache Spark and deep learning. You will set up Spark for deep learning, learn principles of distributed modeling, and understand different types of neural nets. You will then implement deep learning models, such as convolutional neural networks (CNNs), recurrent neural networks (RNNs), and long short-term memory (LSTM) on Spark. As you progress through the book, you will gain hands-on experience of what it takes to understand the complex datasets you are dealing with. During the course of this book, you will use popular deep learning frameworks, such as TensorFlow, DeepLearning4j, and Keras to train your distributed models. By the end of this book, you'll have gained experience with the implementation of your models on a variety of use cases. What you will learn Understand the basics of deep learning Set up Apache Spark for deep learning Understand the principles of distribution modeling and different types of neural networks Obtain an understanding of deep learning algorithms Discover textual analysis and deep learning with

Spark Use popular deep learning frameworks, such as DeepLearning4j, TensorFlow, and Keras Explore popular deep learning algorithms Who this book is for If you are a Scala developer, data scientist, or data analyst who wants to learn how to use Spark for implementing efficient deep learning models, Hands-On Deep Learning with Apache Spark is for you. Knowledge of the core machine learning concepts and some exposure to Spark will be helpful.

Apache Spark Deep Learning Cookbook Addison-Wesley Professional

Apache Spark's speed, ease of use, sophisticated analytics, and multilanguage support makes practical knowledge of this cluster-computing framework a required skill for data engineers and data scientists. With this hands-on guide, anyone looking for an introduction to Spark will learn practical algorithms and examples using PySpark. In each chapter, author Mahmoud Parsian shows you how to solve a data problem with a set of Spark transformations and algorithms. You'll learn how to tackle problems involving ETL, design patterns, machine learning algorithms, data partitioning, and genomics analysis. Each detailed recipe includes PySpark algorithms using the PySpark driver and shell script. With this book, you will: Learn how to select Spark transformations for optimized solutions Explore powerful transformations and reductions including `reduceByKey()`, `combineByKey()`, and `mapPartitions()` Understand data partitioning for optimized queries Build and apply a model using PySpark design patterns Apply motif-finding algorithms to graph data Analyze graph data by using the GraphFrames API Apply PySpark algorithms to clinical and genomics data Learn

how to use and apply feature engineering in ML algorithms
Understand and use practical and pragmatic data design patterns

Modern Data Engineering with Apache Spark Packt

Publishing Ltd

Apache® Spark is one of the fastest growing technology in BigData computing world. It supports multiple programming languages like Java, Scala, Python and R. Hence, many existing and new framework started to integrate Spark platform as well in their platform for instance Hadoop, Cassandra, EMR etc. While creating Spark certification material HadoopExam Engineering team found that there is no proper material and book is available for the Spark (version 2.x) which covers the concepts as well as use of various features and found difficulty in creating the material. Therefore, they decided to create full length book for Spark (Databricks® CRT020 Spark Scala/Python or PySpark Certification) and outcome of that is this book. In this book technical team try to cover both fundamental concepts of Spark 2.x topics which are part of the certification syllabus as well as add as many exercises as possible and in current version we have around 46 hands on exercises added which you can execute on the Databricks community edition, because each of this exercises tested on that platform as well, as this book is focused on the PySpark version of the certification, hence all the exercises and their solution provided in the Python. This book is divided in 13 chapters, as you move ahead chapter by chapter you would be comfortable with the Databricks Spark Python certification (CRT020). Same exercises you can convert into different programming language like Java, Scala & R as well. Its more about the syntax.

Learning Spark Apress

Summary Spark GraphX in Action starts out with an overview of Apache Spark and the GraphX graph processing API. This example-based tutorial then teaches you how to configure GraphX and how to use it interactively. Along the way, you'll collect practical techniques for enhancing applications and applying machine learning algorithms to graph data. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology GraphX is a powerful graph processing API for the Apache Spark analytics engine that lets you draw insights from large datasets. GraphX gives you unprecedented speed and capacity for running massively parallel and machine learning algorithms. About the Book Spark GraphX in Action begins with the big picture of what graphs can be used for. This example-based tutorial teaches you how to use GraphX interactively. You'll start with a crystal-clear introduction to building big data graphs from regular data, and then explore the problems and possibilities of implementing graph algorithms and architecting graph processing pipelines. Along the way, you'll collect practical techniques for enhancing applications and applying machine learning algorithms to graph data. What's Inside Understanding graph technology Using the GraphX API Developing algorithms for big graphs Machine learning with graphs Graph visualization About the Reader Readers should be comfortable writing code. Experience with Apache Spark and Scala is not required. About the Authors Michael Malak has worked on Spark applications for Fortune 500 companies since early 2013. Robin East has worked as a consultant to large organizations for over 15 years and is a data

scientist at Worldpay. Table of Contents PART 1 SPARK AND GRAPHS Two important technologies: Spark and graphs GraphX quick start Some fundamentals PART 2 CONNECTING VERTICES GraphX Basics Built-in algorithms Other useful graph algorithms Machine learning PART 3 OVER THE ARC The missing algorithms Performance and monitoring Other languages and tools [Spark in Action](#) O'Reilly Media

Big Data Analytics with Spark is a step-by-step guide for learning Spark, which is an open-source fast and general-purpose cluster computing framework for large-scale data analysis. You will learn how to use Spark for different types of big data analytics projects, including batch, interactive, graph, and stream data analysis as well as machine learning. In addition, this book will help you become a much sought-after Spark expert. Spark is one of the hottest Big Data technologies. The amount of data generated today by devices, applications and users is exploding. Therefore, there is a critical need for tools that can analyze large-scale data and unlock value from it. Spark is a powerful technology that meets that need. You can, for example, use Spark to perform low latency computations through the use of efficient caching and iterative algorithms; leverage the features of its shell for easy and interactive Data analysis; employ its fast batch processing and low latency features to process your real time data streams and so on. As a result, adoption of Spark is rapidly growing and is replacing Hadoop MapReduce as the technology of choice for big data analytics. This book provides an introduction to Spark and related big-data technologies. It covers Spark core and its add-on libraries, including Spark SQL, Spark Streaming, GraphX, and MLlib. Big Data Analytics with Spark is therefore written for busy

professionals who prefer learning a new technology from a consolidated source instead of spending countless hours on the Internet trying to pick bits and pieces from different sources. The book also provides a chapter on Scala, the hottest functional programming language, and the program that underlies Spark. You'll learn the basics of functional programming in Scala, so that you can write Spark applications in it. What's more, Big Data Analytics with Spark provides an introduction to other big data technologies that are commonly used along with Spark, like Hive, Avro, Kafka and so on. So the book is self-sufficient; all the technologies that you need to know to use Spark are covered. The only thing that you are expected to know is programming in any language. There is a critical shortage of people with big data expertise, so companies are willing to pay top dollar for people with skills in areas like Spark and Scala. So reading this book and absorbing its principles will provide a boost--possibly a big boost--to your career.

[Spark: The Definitive Guide](#) Packt Publishing Ltd

Leverage Phoenix as an ANSI SQL engine built on top of the highly distributed and scalable NoSQL framework HBase. Learn the basics and best practices that are being adopted in Phoenix to enable a high write and read throughput in a big data space. This book includes real-world cases such as Internet of Things devices that send continuous streams to Phoenix, and the book explains how key features such as joins, indexes, transactions, and functions help you understand the simple, flexible, and powerful API that Phoenix provides. Examples are provided using real-time data and data-driven businesses that show you how to collect, analyze, and act in seconds. Pro Apache Phoenix covers

the nuances of setting up a distributed HBase cluster with Phoenix libraries, running performance benchmarks, configuring parameters for production scenarios, and viewing the results. The book also shows how Phoenix plays well with other key frameworks in the Hadoop ecosystem such as Apache Spark, Pig, Flume, and Sqoop. You will learn how to: Handle a petabyte data store by applying familiar SQL techniques Store, analyze, and manipulate data in a NoSQL Hadoop echo system with HBase Apply best practices while working with a scalable data store on Hadoop and HBase Integrate popular frameworks (Apache Spark, Pig, Flume) to simplify big data analysis Demonstrate real-time use cases and big data modeling techniques Who This Book Is For Data engineers, Big Data administrators, and architects.

Pro Apache Phoenix Manning

Apache Spark is a fast, scalable, and flexible open source distributed processing engine for big data systems and is one of the most active open source big data projects to date. In just 24 lessons of one hour or less, Sams Teach Yourself Apache Spark in 24 Hours helps you build practical Big Data solutions that leverage Spark's amazing speed, scalability, simplicity, and versatility. This book's straightforward, step-by-step approach shows you how to deploy, program, optimize, manage, integrate, and extend Spark-now, and for years to come. You'll discover how to create powerful solutions encompassing cloud computing, real-time stream processing, machine learning, and more. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success. Whether you are a data analyst, data engineer, data scientist, or data steward, learning Spark will help you to advance your career or embark on a new

career in the booming area of Big Data. Learn how to • Discover what Apache Spark does and how it fits into the Big Data landscape • Deploy and run Spark locally or in the cloud • Interact with Spark from the shell • Make the most of the Spark Cluster Architecture • Develop Spark applications with Scala and functional Python • Program with the Spark API, including transformations and actions • Apply practical data engineering/analysis approaches designed for Spark • Use Resilient Distributed Datasets (RDDs) for caching, persistence, and output • Optimize Spark solution performance • Use Spark with SQL (via Spark SQL) and with NoSQL (via Cassandra) • Leverage cutting-edge functional programming techniques • Extend Spark with streaming, R, and Sparkling Water • Start building Spark-based machine learning and graph-processing applications • Explore advanced messaging technologies, including Kafka • Preview and prepare for Spark's next generation of innovations Instructions walk you through common questions, issues, and tasks; Q-and-As, Quizzes, and Exercises build and test your knowledge; "Did You Know?" tips offer insider advice and shortcuts; and "Watch Out!" alerts help you avoid pitfalls. By the time you're finished, you'll be comfortable using Apache Spark to solve a wide spectrum of Big Data problems.

Backpacker Packt Publishing Ltd

Simplify machine learning model implementations with Spark About This Book Solve the day-to-day problems of data science with Spark This unique cookbook consists of exciting and intuitive numerical recipes Optimize your work by acquiring, cleaning, analyzing, predicting, and visualizing your data Who This Book Is For This book is for Scala developers with a fairly good exposure

to and understanding of machine learning techniques, but lack practical implementations with Spark. A solid knowledge of machine learning algorithms is assumed, as well as hands-on experience of implementing ML algorithms with Scala. However, you do not need to be acquainted with the Spark ML libraries and ecosystem. What You Will Learn Get to know how Scala and Spark go hand-in-hand for developers when developing ML systems with Spark Build a recommendation engine that scales with Spark Find out how to build unsupervised clustering systems to classify data in Spark Build machine learning systems with the Decision Tree and Ensemble models in Spark Deal with the curse of high-dimensionality in big data using Spark Implement Text analytics for Search Engines in Spark Streaming Machine Learning System implementation using Spark In Detail Machine learning aims to extract knowledge from data, relying on fundamental concepts in computer science, statistics, probability, and optimization. Learning about algorithms enables a wide range of applications, from everyday tasks such as product recommendations and spam filtering to cutting edge applications such as self-driving cars and personalized medicine. You will gain hands-on experience of applying these principles using Apache Spark, a resilient cluster computing system well suited for large-scale machine learning tasks. This book begins with a quick overview of setting up the necessary IDEs to facilitate the execution of code examples that will be covered in various chapters. It also highlights some key issues developers face while working with machine learning algorithms on the Spark platform. We progress by uncovering the various Spark APIs and the implementation of ML algorithms with developing classification

systems, recommendation engines, text analytics, clustering, and learning systems. Toward the final chapters, we'll focus on building high-end applications and explain various unsupervised methodologies and challenges to tackle when implementing with big data ML systems. Style and approach This book is packed with intu ...

[Frank Kane's Taming Big Data with Apache Spark and Python](#)
Mitchell Lane Publishers, Inc.

Unleash the data processing and analytics capability of Apache Spark with the language of choice: Java About This Book Perform big data processing with Spark—without having to learn Scala! Use the Spark Java API to implement efficient enterprise-grade applications for data processing and analytics Go beyond mainstream data processing by adding querying capability, Machine Learning, and graph processing using Spark Who This Book Is For If you are a Java developer interested in learning to use the popular Apache Spark framework, this book is the resource you need to get started. Apache Spark developers who are looking to build enterprise-grade applications in Java will also find this book very useful. What You Will Learn Process data using different file formats such as XML, JSON, CSV, and plain and delimited text, using the Spark core Library. Perform analytics on data from various data sources such as Kafka, and Flume using Spark Streaming Library Learn SQL schema creation and the analysis of structured data using various SQL functions including Windowing functions in the Spark SQL Library Explore Spark Mlib APIs while implementing Machine Learning techniques to solve real-world problems Get to know Spark GraphX so you understand various graph-based analytics that can be performed

with Spark In Detail Apache Spark is the buzzword in the big data industry right now, especially with the increasing need for real-time streaming and data processing. While Spark is built on Scala, the Spark Java API exposes all the Spark features available in the Scala version for Java developers. This book will show you how you can implement various functionalities of the Apache Spark framework in Java, without stepping out of your comfort zone. The book starts with an introduction to the Apache Spark 2.x ecosystem, followed by explaining how to install and configure Spark, and refreshes the Java concepts that will be useful to you when consuming Apache Spark's APIs. You will explore RDD and its associated common Action and Transformation Java APIs, set up a production-like clustered environment, and work with Spark SQL. Moving on, you will perform near-real-time processing with Spark streaming, Machine Learning analytics with Spark MLlib, and graph processing with GraphX, all using various Java packages. By the end of the book, you will have a solid foundation in implementing components in the Spark framework in Java to build fast, real-time applications. Style and approach This practical guide teaches readers the fundamentals of the Apache Spark framework and how to implement components using the Java language. It is a unique

blend of theory and practical examples, and is written in a way that will gradually build your knowledge of Apache Spark.

Guide for Databricks® Spark Python (PySpark) CRT020 Certification Packt Publishing Ltd

"Spark is one of the most widely-used large-scale data processing engines and runs extremely fast. It is a framework that has tools that are equally useful for application developers as well as data scientists. This book starts with the fundamentals of Spark 2 and covers the core data processing framework and API, installation, and application development setup. Then the Spark programming model is introduced through real-world examples followed by Spark SQL programming with DataFrames. An introduction to SparkR is covered next. Later, we cover the charting and plotting features of Python in conjunction with Spark data processing. After that, we take a look at Spark's stream processing, machine learning, and graph processing libraries. The last chapter combines all the skills you learned from the preceding chapters to develop a real-world Spark application. By the end of this video, you will be able to consolidate data processing, stream processing, machine learning, and graph processing into one unified and highly interoperable framework with a uniform API using Scala or Python."--Resource description page.