Collaborative Filtering With Apache Mahout Researchgate

KANE LUCIANO

Data Science and Analytics (with Python, R and SPSS Programming)
Packt Publishing Ltd
The book covers cutting-edge and advanced research in modelling and graphics. Gathering high-quality papers presented at the First International Conference on Emerging Technology in Modelling and Graphics, held from 6 to 8 September 2018 in Kolkata, India, it addresses topics including: image processing and analysis, image segmentation, digital geometry for computer imaging, image and security, biometrics, video processing, medical imaging, and virtual and augmented reality.

Apache Mahout Cookbook IOS Press
In 2018, '77 Building Blocks of Digital Transformation: The Digital Capability Model' was published to help 'digital practitioners' working in the digital space. Since then, quite a few readers have suggested writing a book about digital transformation for 'the general public' interested in learning more than basics of digital transformation. That is how the book '77 Building Blocks of Digital Transformation: Simply Explained' has been created.This book is intended to deliver the key messages of 'the 77 Building Blocks' to the general public. It aims to help the general public understand 'actual practices' in the digital space. This is not a theory book that discusses the academical ideas and concepts of digital transformation, but a 'practical' field book that describes the proven digital capabilities as the building blocks of digital transformation. This book does however not fully cover the technical detail of the Maturity Model described in '77 Building Blocks of Digital transformation: The Digital Capability Model' that aims to help digital practitioners with measuring digital maturity. Instead, this book provides examples of higher maturity indicators as an introduction to the Maturity Model. If you are looking for a deep dive into the Maturity Model, refer to '77 Building Blocks

of Digital transformation: The Digital Capability Model'.This book covers:1. Digital Customer Experience Management -Digital Customer Journey Management -User Research -Usability Analysis -User Experience Designing -User Experience Testing 2. Social Interaction -Social Listening -Social Media Marketing -Social Media Servicing -Online Community Management -Rating & Review Management -Content Moderation -Social Crisis Management3. Digital Marketing -Digital Brand Marketing -Search Engine Optimization -Paid Search -Content Targeting -Affiliate Marketing -Online Advertising -Digital Campaign Management -Lead Management -Marketing Offer Management -Email Marketing -Mobile Marketing -Marketing Automation -Conversion Rate Optimization4. Digital Commerce -Online Merchandising -Shopping Cart & Checkout -Payments & Reconciliation -Order Management & Fulfillment -Account Management & Self-Service5. Digital Channel Management -Channel Mix & Optimization -Cross-Business Integration -Cross-Channel Integration -Multi-Device Presentation6. Knowledge & Content Management -Knowledge Collaboration -Knowledge Base Management -Content Lifecycle Management -Digital Asset Management -Content Aggregation & Syndication -Web Content Management7. Customization & Personalization -Customer Preference Management -Customer Communication Management -Social Behaviour Management -Interaction Tracking & Management -Customer Loyalty Management -Digital Customer Services8. Digital Intelligence -Product Similarity Analytics -Customer Insights -Customer Segmentation -Conversion Analytics -Digital Marketing Effectiveness -Big Data Analytics -Web Analytics -Reporting & Dashboard9. Digital Data Management -Non-relational Data Management -Distributed Data Store Management -Enterprise Search -Master Data Management -Data Quality Management -Digital Data Policy Management10. Digital Infrastructure Management -On-Demand Provisioning -User Interaction Services -Process Integration Services -Parallel Processing Services -Federated Access Management -Digital Continuity Management11. Digital Alignment -Digital Innovation -Digital Planning -Digital Governance -Cross-Boundary Collaboration -Digital Journey Readiness12. Digital Development & Operations -Digital Program & Project Management -Digital Design Authority -Digital Capability Development -Digital Capability Introduction -Digital Service Operations -Digital Quality Management

Machine Learning in Java Springer Nature

This book includes 46 scientific papers presented at the conference and reflecting the latest research in the fields of data mining, machine learning and decision-making. The international scientific conference “Intellectual Systems of Decision-Making and Problems of Computational Intelligence” was held in the Kherson region, Ukraine, from May 25 to 29, 2020. The papers are divided into three sections: “Analysis and Modeling of Complex Systems and Processes,” “Theoretical and Applied Aspects of Decision-Making Systems” and “Computational Intelligence and Inductive Modeling.” The book will be of interest to scientists and developers specialized in the fields of data mining, machine learning and decision-making systems.

77 Building Blocks of Digital Transformation Now Publishers Inc

This book discusses advanced topics such as R core programing, object oriented R programing, parallel computing with R, and spatial data types. The author leads readers to merge mature and effective methdologies in traditional programing to R programing. It shows how to interface R with C, Java, and other popular programing laguages and platforms.

Intelligent Systems Packt Publishing Ltd

This book comprehensively covers the topic of recommender systems, which provide personalized recommendations of products or services to users based on their previous searches or purchases. Recommender system methods have been adapted to diverse applications including query log mining, social networking, news recommendations, and computational advertising. This book synthesizes both fundamental and advanced topics of a research area that has now reached maturity. The chapters of this book are organized into three categories: Algorithms and evaluation: These chapters discuss the fundamental algorithms in recommender systems, including collaborative filtering methods, content-based methods, knowledge-based methods, ensemble-based methods, and evaluation. Recommendations in specific domains and contexts: the context of a recommendation can be viewed as important side information that affects the recommendation goals. Different types of context such as temporal data, spatial data, social data, tagging data, and trustworthiness are explored. Advanced topics and applications: Various robustness aspects of recommender systems, such as shilling systems, attack models, and their defenses are discussed. In addition, recent topics, such as learning to rank, multi-armed bandits, group systems, multi-criteria systems, and active learning systems, are introduced together with applications. Although this book primarily serves as a textbook, it will also appeal to industrial practitioners and researchers due to its focus on applications and references. Numerous examples and exercises have been provided, and a solution manual is available for instructors.

R for Programmers Springer

Apache Mahout: Beyond MapReduce. Distributed algorithm design This book is about designing mathematical and Machine Learning algorithms using the Apache Mahout "Samsara" platform. The material takes on best programming practices as well as conceptual approaches to attacking Machine Learning problems in big datasets. Math is explained, followed by code examples of distributed and in-memory computations. Written by Apache Mahout committers for people who want to learn how to design distributed math algorithms as well as how to use some of the new Mahout "Samsara" algorithms off-the-shelf. The book covers Apache Mahout 0.10 and 0.11.

Predictive Analytics For Dummies Packt Publishing Ltd

The proposed book talks about the participation of human in Big Data.How human as a component of system can help in making the decision process easier and vibrant.It studies the basic build structure for big data and also includes advanced research topics.In the field of Biological sciences, it comprises genomic and proteomic data also. The book swaps traditional data management techniques with more robust and vibrant methodologies that focus on current requirement and demand through human computer interfacing in order to cope up with present business demand. Overall, the book is divided in to five parts where each part contains 4-5 chapters on versatile domain with human side of Big Data.

Advanced Data Mining Tools and Methods for Social Computing John Wiley & Sons

This book is intended for academic and industrial developers, exploring and developing applications in the area of big data and machine learning, including those that are solving technology requirements, evaluation of methodology advances and algorithm demonstrations. The intent of this book is to provide awareness of algorithms used for machine learning and big data in the academic and professional community. The 17 chapters

are divided into 5 sections: Theoretical Fundamentals; Big Data and Pattern Recognition; Machine Learning: Algorithms & Applications; Machine Learning's Next Frontier and Hands-On and Case Study. While it dwells on the foundations of machine learning and big data as a part of analytics, it also focuses on contemporary topics for research and development. In this regard, the book covers machine learning algorithms and their modern applications in developing automated systems. Subjects covered in detail include: Mathematical foundations of machine learning with various examples. An empirical study of supervised learning algorithms like Naïve Bayes, KNN and semi-supervised learning algorithms viz. S3VM, Graph-Based, Multiview. Precise study on unsupervised learning algorithms like GMM, K-mean clustering, Dritchlet process mixture model, X-means and Reinforcement learning algorithm with Q learning, R learning, TD learning, SARSA Learning, and so forth. Hands-on machine leaning open source tools viz. Apache Mahout, H2O. Case studies for readers to analyze the prescribed cases and present their solutions or interpretations with intrusion detection in MANETS using machine learning. Showcase on novel user-cases: Implications of Electronic Governance as well as Pragmatic Study of BD/ML technologies for agriculture, healthcare, social media, industry, banking, insurance and so on.

Machine Learning and Big Data CRC Press TAGLINE Empower Your Data Insights with Java's Top Tools and Frameworks. KEY FEATURES ● Explore diverse techniques and algorithms for data analytics using Java. ● Learn through hands-on examples and practical applications in each chapter. ● Master essential tools and frameworks such as JFreeChart for data visualization and Deeplearning4j for deep learning. DESCRIPTION This book is a comprehensive guide to data analysis using Java. It starts with the fundamentals, covering the purpose of data analysis, different data types and structures, and how to pre-process datasets. It then introduces popular Java libraries like WEKA and Rapidminer for efficient data analysis. The middle section of the book dives deeper into statistical techniques like descriptive analysis and random sampling, along with practical skills in working with relational databases (JDBC, SQL, MySQL) and NoSQL databases. It also explores various analysis methods like regression, classification, and clustering, along with applications in business intelligence and time series prediction. The final part of the book gives a brief overview of big data analysis with Java frameworks like MapReduce, and introduces deep learning with the Deeplearning4J library. Whether you're new to data analysis or want to improve your Java skills, this book offers a step-by-step approach with real-world examples to help you master data analysis using Java. WHAT WILL YOU LEARN ● Understand foundational principles and types of data analytics, including descriptive, diagnostic, predictive, and prescriptive analytics. ● Master techniques for preprocessing data, including cleaning and munging, to prepare it for analysis. ● Learn how to create various charts and plots including bar charts, histograms, and scatter plots for effective data visualization. ● Explore Java-based libraries such as WEKA and Deeplearning4j for implementing machine learning algorithms. ● Develop expertise in statistical techniques including hypothesis testing, regression (linear and polynomial), and probability distributions. ● Acquire practical skills in SQL querying and JDBC for relational databases. ● Explore applications in business intelligence and deep learning, including image recognition and natural language processing. WHO IS THIS BOOK FOR? This book is ideal for IT professionals, software developers, and data scientists interested in using Java for data analytics. It is also suitable for students and researchers seeking practical insights into Java-based data analysis. Readers should have a basic understanding of Java programming and fundamental concepts in data analysis. TABLE OF CONTENTS 1. Data Analytics Using Java 2. Datasets 3. Data Visualization 4. Java Machine Learning Libraries 5. Statistical Analysis 6. Relational Databases 7. Regression Analysis 8. Classification Analysis 9. Sentiment Analysis 10. Cluster Analysis 11. Working with NoSQL Databases 12. Recommender Systems 13. Applications of Data Analysis 14. Big Data Analysis with Java 15. Deep Learning with Java Index

Recommender Systems for Social Tagging Systems Springer

Dig deep into the data with a hands-on guide to machine learning Machine Learning: Hands-On for Developers and Technical Professionals provides hands-on instruction and fully-coded working examples for the most common machine learning techniques used by developers and technical professionals. The book contains a breakdown of each ML variant, explaining how it works and how it is used within certain industries, allowing readers to incorporate the presented techniques into their own work as they follow along. A core tenant of machine learning is a strong focus on data preparation, and a full exploration of the various types of learning algorithms illustrates how the proper tools can help any developer extract information and insights from existing data. The book includes a full complement of Instructor's Materials to facilitate use in the classroom, making this resource useful for students and as a professional reference. At its core, machine learning is a mathematical, algorithm-based technology that forms the basis of historical data mining and modern big data science. Scientific analysis of big data requires a working knowledge of machine learning, which forms predictions based on known properties learned from training data. Machine Learning is an accessible, comprehensive guide for the non-mathematician, providing clear guidance that allows readers to: Learn the languages of machine learning including Hadoop, Mahout, and Weka Understand decision trees, Bayesian networks, and artificial neural networks Implement Association Rule, Real Time, and Batch learning Develop a strategic plan for safe, effective, and efficient machine learning By learning to construct a system that can learn from data, readers can increase their utility across industries. Machine learning sits at the core of deep dive data analysis and visualization, which is increasingly in demand as companies discover the goldmine hiding in their existing data. For the tech professional involved in data science, Machine Learning: Hands-On for Developers and Technical Professionals provides the skills and techniques required to dig deeper.

Machine Learning: End-to-End guide for Java developers GRIN Verlag

Do you want to broaden your Hadoop skill set and take your knowledge to the next level? Do you wish to enhance your knowledge of Hadoop to solve challenging data processing problems? Are your Hadoop jobs, Pig scripts, or Hive queries not working as fast as you intend? Are you looking to understand the benefits of upgrading Hadoop? If the answer is yes to any of these, this book is for you. It assumes novice-level familiarity with Hadoop.

Lecture Notes in Computational Intelligence and Decision Making Springer

Recipes to help you overcome your data science hurdles using Java About This Book This book provides modern recipes in small steps to help an apprentice cook become a master chef in data science Use these recipes to obtain, clean, analyze, and learn from your data Learn how to get your data science applications to production and enterprise environments

effortlessly Who This Book Is For This book is for Java developers who are familiar with the fundamentals of data science and want to improve their skills to become a pro. What You Will Learn Find out how to clean and make datasets ready so you can acquire actual insights by removing noise and outliers Develop the skills to use modern machine learning techniques to retrieve information and transform data to knowledge. retrieve information from large amount of data in text format. Familiarize yourself with cutting-edge techniques to store and search large volumes of data and retrieve information from large amounts of data in text format Develop basic skills to apply big data and deep learning technologies on large volumes of data Evolve your data visualization skills and gain valuable insights from your data Get to know a step-by-step formula to develop an industry-standard, large-scale, real-life data product Gain the skills to visualize data and interact with users through data insights In Detail If you are looking to build data science models that are good for production, Java has come to the rescue. With the aid of strong libraries such as MLlib, Weka, DL4j, and more, you can efficiently perform all the data science tasks you need to. This unique book provides modern recipes to solve your common and not-so-common data science-related problems. We start with recipes to help you obtain, clean, index, and search data. Then you will learn a variety of techniques to analyze, learn from, and retrieve information from data. You will also understand how to handle big data, learn deeply from data, and visualize data. Finally, you will work through unique recipes that solve your problems while taking data science to production, writing distributed data science applications, and much more—things that will come in handy at work. Style and approach This book contains short yet very effective recipes to solve most common problems. Some recipes cater to very specific, rare pain points. The recipes cover different data sets and work very closely to real production environments

Handbook of Big Data Technologies Springer

The book proposes new technologies and discusses future solutions for design infrastructure for ICT. The book contains high quality submissions presented at Second International Conference on Information and Communication Technology for Sustainable Development (ICT4SD - 2016) held at Goa, India during 1 - 2 July, 2016. The conference stimulates the cutting-edge research discussions among many academic pioneering researchers, scientists, industrial engineers, and students from all around the world. The topics covered in this book also focus on innovative issues at international level by bringing together the experts from different countries.

Recommender Systems Simon and Schuster

This handbook offers comprehensive coverage of recent advancements in Big Data technologies and related paradigms. Chapters are authored by international leading experts in the field, and have been reviewed and revised for maximum reader value. The volume consists of twenty-five chapters organized into four main parts. Part one covers the fundamental concepts of Big Data technologies including data curation mechanisms, data models, storage models, programming models and programming platforms. It also dives into the details of implementing Big SQL query engines and big stream processing systems. Part Two focuses on the semantic aspects of Big Data management including data integration and exploratory ad hoc analysis in addition to structured querying and pattern matching techniques. Part Three presents a comprehensive overview of large scale graph processing. It covers the most recent research in large scale graph processing platforms, introducing several scalable graph querying and mining mechanisms in domains such as social networks. Part Four details novel applications that have been made possible by the rapid emergence of Big Data technologies such as Internet-of-Things (IOT), Cognitive Computing and SCADA Systems. All parts of the book discuss open research problems, including potential opportunities, that have arisen from the rapid progress of Big Data technologies and the associated increasing requirements of application domains. Designed for researchers, IT professionals and graduate students, this book is a timely contribution to the growing Big Data field. Big Data has been recognized as one of leading emerging technologies that will have a major contribution and impact on the various fields of science and varies aspect of the human society over the coming decades. Therefore, the content in this book will be an essential tool to help readers understand the development and future of the field.

Information and Communication Technology for Sustainable Development Springer Science & Business Media

Leverage the power of Java and its associated machine learning libraries to build powerful predictive models Key FeaturesSolve predictive modeling problems using the most popular machine learning Java libraries Explore data processing, machine learning, and NLP concepts using JavaML, WEKA, MALLET librariesPractical examples, tips, and tricks to help you understand applied machine learning in JavaBook Description As the amount of data in the world continues to grow at an almost incomprehensible rate, being able to understand and process data is becoming a key differentiator for competitive organizations. Machine learning applications are everywhere, from self-driving cars, spam detection, document search, and trading strategies, to speech recognition. This makes machine learning well-suited to the present-day era of big data and Data Science. The main challenge is how to transform data into actionable knowledge. Machine Learning in Java will provide you with the techniques and tools you need. You will start by learning how to apply machine learning methods to a variety of common tasks including classification, prediction, forecasting, market basket analysis, and clustering. The code in this book works for JDK 8 and above, the code is tested on JDK 11. Moving on, you will discover how to detect anomalies and fraud, and ways to perform activity recognition, image recognition, and text analysis. By the end of the book, you will have explored related web resources and technologies that will help you take your learning to the next level. By applying the most effective machine learning methods to real-world problems, you will gain hands-on experience that will transform the way you think about data. What you will learnDiscover key Java machine learning librariesImplement concepts such as classification, regression, and clusteringDevelop a customer retention strategy by predicting likely churn candidatesBuild a scalable recommendation engine with Apache MahoutApply machine learning to fraud, anomaly, and outlier detectionExperiment with deep learning concepts and algorithmsWrite your own activity recognition model for eHealth applicationsWho this book is for If you want to learn how to use Java's machine learning libraries to gain insight from your data, this book is for you. It will get you up and running quickly and provide you with the skills you need to successfully create, customize, and deploy machine learning applications with ease. You should be familiar with Java programming and some basic data mining concepts to make the most of this book, but no prior experience

with machine learning is required.

Emerging Technology in Modelling and Graphics John Wiley & Sons

Apache Mahout is a scalable machine learning library with algorithms for clustering, classification, and recommendations. It empowers users to analyze patterns in large, diverse, and complex datasets faster and more scalably. This book is an all-inclusive guide to analyzing large and complex datasets using Apache Mahout. It explains complicated but very effective machine learning algorithms simply, in relation to real-world practical examples. Starting from the fundamental concepts of machine learning and Apache Mahout, this book guides you through Apache Mahout's implementations of machine learning techniques including classification, clustering, and recommendations. During this exciting walkthrough, real-world applications, a diverse range of popular algorithms and their implementations, code examples, evaluation strategies, and best practices are given for each technique. Finally, you will learn vdata visualization techniques for Apache Mahout to bring your data to life.

Collaborative Filtering Recommender Systems Packt Publishing Ltd

Summary Mahout in Action is a hands-on introduction to machine learning with Apache 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 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 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 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 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 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 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 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 your data Filter and refine with on-the-fly classification Free audio and video extras Table of Contents Meet Apache Mahout PART 1 RECOMMENDATIONS Introducing recommenders Representing recommender data Making recommendations Taking recommenders to production Distributing recommendation computations PART 2 CLUSTERING Introduction to clustering Representing data Clustering algorithms in Mahout Evaluating and improving clustering quality Taking clustering to production Real-world applications of clustering PART 3 CLASSIFICATION Introduction to classification Training a classifier Evaluating and tuning a classifier Deploying a classifier Case study: Shop It To Me

Advances in Parallel Computing Algorithms, Tools and Paradigms Springer

Leverage big data to add value to your business Social media analytics, web-tracking, and other technologies help companies acquire and handle massive amounts of data to better understand their customers, products, competition, and markets. Armed with the insights from big data, companies can improve customer experience and products, add value, and increase return on investment. The tricky part for busy IT professionals and executives is how to get this done, and that's where this practical book comes in. Big Data: Understanding How Data Powers Big Business is a complete how-to guide to leveraging big data to drive business value. Full of practical techniques, real-world examples, and hands-on exercises, this book explores the technologies involved, as well as how to find areas of the organization that can take full advantage of big data. Shows how to decompose current business strategies in order to link big data initiatives to the organization’s value creation processes Explores different value creation processes and models Explains issues surrounding operationalizing big data, including organizational structures, education challenges, and new big data-related roles Provides methodology worksheets and exercises so readers can apply techniques Includes real-world examples from a variety of organizations leveraging big data Big Data: Understanding How Data Powers Big Business is written by one of Big Data's preeminent experts, William Schmarzo. Don't miss his invaluable insights and advice.

Big Data CRC Press

“Big data” has become a commonly used term to describe large-scale and complex data sets which are difficult to manage and analyze using standard data management methodologies. With applications across sectors and fields of study, the implementation and possible uses of big data are limitless. Effective Big Data Management and Opportunities for Implementation explores emerging research on the ever-growing field of big data and facilitates further knowledge development on methods for handling and interpreting large data sets. Providing multi-disciplinary perspectives fueled by international research, this publication is designed for use by data analysts, IT professionals, researchers, and graduate-level students interested in learning about the latest trends and concepts in big data.

Machine Learning John Wiley & Sons

Build and run intelligent applications by leveraging key Java machine learning libraries About This Book Develop a sound strategy to solve predictive modelling problems using the most popular machine learning Java libraries. Explore a broad variety of data processing, machine learning, and natural language processing through diagrams, source code, and real-world applications This step-by-step guide will help you solve real-world problems and links neural network theory to their application Who This Book Is For This course is intended for data scientists and Java developers who want to dive into the exciting world of deep learning. It will get you up and running quickly and provide you with the skills you need to successfully create, customize, and deploy machine learning applications in real life. What You Will Learn Get a practical deep dive into machine learning and deep learning algorithms Explore neural networks using some of the most popular Deep Learning frameworks Dive into Deep Belief Nets and Stacked Denoising Autoencoders algorithms Apply machine learning to fraud, anomaly, and outlier detection Experiment with deep learning concepts, algorithms, and the toolbox for deep learning Select and split data sets into training, test, and validation, and explore validation strategies Apply the code generated in practical examples, including weather forecasting and pattern recognition In Detail Machine learning applications are everywhere, from self-driving cars, spam detection, document search, and trading strategies, to speech

recognitionStarting with an introduction to basic machine learning algorithms, this course takes you further into this vital world of stunning predictive insights and remarkable machine intelligence. This course helps you solve challenging problems in image processing, speech recognition, language modeling. You will discover how to detect anomalies and fraud, and ways to perform activity recognition, image recognition, and text. You will also work with examples such as weather forecasting, disease diagnosis, customer profiling, generalization, extreme machine learning and more. By the end of this course, you will have all the knowledge you need to perform deep learning on your system with varying complexity levels, to apply them to your daily work. The course provides you with highly practical content explaining deep learning with Java, from the following Packt books: Java Deep Learning Essentials Machine Learning in Java Neural Network Programming with Java, Second Edition Style and approach This course aims to create a smooth learning path that will teach you how to effectively use deep learning with Java with other de facto components to get the most out of it. Through this comprehensive course, you'll learn the basics of predictive modelling and progress to solve real-world problems and links neural network theory to their application

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