

Customer Analytics Using Deep Learning With Keras To

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Hands-On Data Science for Marketing - Yoon Hyup Hwang 2019-03-29

Optimize your marketing strategies through analytics and machine learning Key Features Understand how data science drives successful marketing campaigns Use machine

learning for better customer engagement, retention, and product recommendations Extract insights from your data to optimize marketing strategies and increase profitability Book Description Regardless of company size, the adoption of data science and machine learning

for marketing has been rising in the industry. With this book, you will learn to implement data science techniques to understand the drivers behind the successes and failures of marketing campaigns. This book is a comprehensive guide to help you understand and predict customer behaviors and create more effectively targeted and personalized marketing strategies. This is a practical guide to performing simple-to-advanced tasks, to extract hidden insights from the data and use them to make smart business decisions. You will understand what drives sales and increases customer engagements for your products. You will learn to implement machine learning to forecast which customers are more likely to engage with the products and have high lifetime value. This book will also show you how to use machine learning techniques to understand different customer segments and recommend the right products for each customer. Apart from learning to gain insights into consumer behavior using exploratory

analysis, you will also learn the concept of A/B testing and implement it using Python and R. By the end of this book, you will be experienced enough with various data science and machine learning techniques to run and manage successful marketing campaigns for your business. What you will learn
Learn how to compute and visualize marketing KPIs in Python and R
Master what drives successful marketing campaigns with data science
Use machine learning to predict customer engagement and lifetime value
Make product recommendations that customers are most likely to buy
Learn how to use A/B testing for better marketing decision making
Implement machine learning to understand different customer segments
Who this book is for
If you are a marketing professional, data scientist, engineer, or a student keen to learn how to apply data science to marketing, this book is what you need! It will be beneficial to have some basic knowledge of either Python or R to work through the

examples. This book will also be beneficial for beginners as it covers basic-to-advanced data science concepts and applications in marketing with real-life examples.

Artificial Intelligence and Deep Learning for Decision Makers - Kaur Dr. Jagreet 2019-12-28

Learn modern-day technologies from modern-day technical giants. KEY FEATURES

1. Real-world success and failure stories of artificial intelligence explained
2. Understand concepts of artificial intelligence and deep learning methods
3. Learn how to use artificial intelligence and deep learning methods
4. Know how to prepare dataset and implement models using industry leading Python packages
5. You'll be able to apply and analyze the results produced by the models for prediction

DESCRIPTION The aim of this book is to help the readers understand the concept of artificial intelligence and deep learning methods and implement them into their businesses and organizations. The first two chapters describe the introduction of the

artificial intelligence and deep learning methods. In the first chapter, the concept of human thinking process, starting from the biochemical responses within the structure of neurons to the problem-solving steps through computational thinking skills are discussed. All chapters after the first two should be considered as the study of different technological and Artificial Intelligence giants of current age. These chapters are placed in a way that each chapter could be considered a separate study of a separate company, which includes the achievements of intelligent services currently provided by the company, discussion on the business model of the company towards the use of the deep learning technologies, the advancement of the web services which are incorporated with intelligent capability introduced by company, the efforts of the company in contributing to the development of the artificial intelligence and deep learning research. WHAT WILL YOU LEARN How to use

the algorithms written in the Python programming language to design models and perform predictions in general datasets Understand use cases in different industries related to the implementation of artificial intelligence and deep learning methods Learn the use of potential ideas in artificial intelligence and deep learning methods to improve the operational processes or new products and how services can be produced based on the methods

WHO THIS BOOK IS FOR This book is targeted to business and organization leaders, technology enthusiasts, professionals, and managers who seek knowledge of artificial intelligence and deep learning methods.

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1. Artificial Intelligence and Deep Learning
2. Data Science for Business Analysis
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6. Advancement web services by Baidu
7. Improved Social Business by Facebook
8. Personalized

Intelligent Computing by Apple

9. Cloud Computing Intelligent by Microsoft

About the Author

Dr. Jagreet Kaur

Dr. Jagreet Kaur is a doctorate in computer science and engineering. Her topic of thesis was "e;ARTIFICIAL INTELLIGENCE BASED ANALYTICAL PLATFORM FOR PREDICTIVE ANALYSIS IN HEALTH CARE."e; With more than 12 years of experience in academics and research, she is working in data wrangling, machine learning and deeplearning algorithms on large datasets, real-time data often in production environments for data science solutions and data products to get actionable insights for the last four years. She also possesses ten international publications and five national publications under her name. Her skill set includes data engineering skills (Hadoop, Apache Spark, Apache Kafka, Cassandra, Hive, Flume, Scoop, and Elasticsearch), programming skills (Python, Angularjs, D3.js , Machine Learning, and R), data science skills (Statistics, Machine Learning,

NLP, NLTK, Artificial Intelligence, R, Python, Pandas, Sklearn, Hadoop, SQL, Statistical Modeling, Data Munging, Decision Science, Machine Learning, Graph Analysis, Text Mining and Optimization, and Web Scraping, Deep learning packages:- Theano, Keras, Tensorflow, Pytorch, Julia) and Algorithms Specialization (Regression Algorithms: Linear Regression, Random Forest Regressor, XGBoost, SVR, Ridge Regression, Lasso Regression, Neural Networks Classification Algorithms: Decision Trees, Random Forest Classifier, Support Vector Machines(SVM), Logistic Regression, KNN Classifier, Neural Network, Clustering Algorithms: K-Means, DBSCAN, Deep Learning Algorithms: Simple RNN, LSTM Network, GRU)Currently, she works as a Chief Operating Officer (COO) and Chief Data Scientist in Xenonstack. Under her Guidance, more than 400 projects are already developed and productionized which also includes more than 200 AI and data science projects. Navdeep Singh

GillNaveed Singh Gill is a technology and solution architect having more than 15 years of experience in the IT and Telecom industry. For the past six years, he is working in big data analytics, automation and advanced analytics using machine learning and deep learning for planning and architecting of data science solutions and data products. He's also working in 3 As (Analytics, Automation, and AI), more focused on writing software for building data lake, analytics platform , NoSQL deployments, data migration, data modelling tasks, ML/DL on real-time data often in production environments.He started his career with HFCL Infotel as a network engineer for managing the technical network of Broadband Customers with Linux servers and Cisco routers. He also worked in Ericsson, where he handled the synchronization plan and implementation for synchronization of Microwave Network and Media Gateway, MSS, and Core Network. SSU Implementation Planning and Optimization with

respect to IP RAN, Mobile Backhaul Solution-Optimization of Existing Microwave Network to Ethernet, Microwave Hybrid Solution, Convergence to all IP, SIU Implementation for conversion to IP of Existing BTS,GB over IP.His area of expertise includes Hadoop, Openstack, DevOps, Kubernetes, Dockers, Amazon web services, Apache Spark, Apache Storm, Apache Kafka, Hbase, Solr, Apache FlinkNutch, Mapreduce, Pig, Hive, Flume, Scoop, ElasticSearch, and programming expertise includes Python, Angular.js, and Node.js.

Deep Learning with R - J.J. Allaire 2018-01-22

Summary Deep Learning with R introduces the world of deep learning using the powerful Keras library and its R language interface. The book builds your understanding of deep learning through intuitive explanations and practical examples. Continue your journey into the world of deep learning with Deep Learning with R in Motion, a practical, hands-on video course available exclusively at Manning.com

(www.manning.com/livevideo/deep-learning-with-r-in-motion). Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Machine learning has made remarkable progress in recent years. Deep-learning systems now enable previously impossible smart applications, revolutionizing image recognition and natural-language processing, and identifying complex patterns in data. The Keras deep-learning library provides data scientists and developers working in R a state-of-the-art toolset for tackling deep-learning tasks. About the Book Deep Learning with R introduces the world of deep learning using the powerful Keras library and its R language interface. Initially written for Python as Deep Learning with Python by Keras creator and Google AI researcher François Chollet and adapted for R by RStudio founder J. J. Allaire, this book builds your understanding of deep learning through intuitive explanations and

practical examples. You'll practice your new skills with R-based applications in computer vision, natural-language processing, and generative models. What's Inside Deep learning from first principles Setting up your own deep-learning environment Image classification and generation Deep learning for text and sequences About the Reader You'll need intermediate R programming skills. No previous experience with machine learning or deep learning is assumed. About the Authors François Chollet is a deep-learning researcher at Google and the author of the Keras library. J.J. Allaire is the founder of RStudio and the author of the R interfaces to TensorFlow and Keras. Table of Contents PART 1 - FUNDAMENTALS OF DEEP LEARNING What is deep learning? Before we begin: the mathematical building blocks of neural networks Getting started with neural networks Fundamentals of machine learning PART 2 - DEEP LEARNING IN PRACTICE Deep learning for computer vision Deep learning for text and

sequences Advanced deep-learning best practices Generative deep learning Conclusions [Deep Learning with Keras](#) - Antonio Gulli 2017-04-26

Get to grips with the basics of Keras to implement fast and efficient deep-learning models About This Book Implement various deep-learning algorithms in Keras and see how deep-learning can be used in games See how various deep-learning models and practical use-cases can be implemented using Keras A practical, hands-on guide with real-world examples to give you a strong foundation in Keras Who This Book Is For If you are a data scientist with experience in machine learning or an AI programmer with some exposure to neural networks, you will find this book a useful entry point to deep-learning with Keras. A knowledge of Python is required for this book. What You Will Learn Optimize step-by-step functions on a large neural network using the Backpropagation Algorithm Fine-tune a neural network to improve

the quality of results Use deep learning for image and audio processing Use Recursive Neural Tensor Networks (RNTNs) to outperform standard word embedding in special cases Identify problems for which Recurrent Neural Network (RNN) solutions are suitable Explore the process required to implement Autoencoders Evolve a deep neural network using reinforcement learning In Detail This book starts by introducing you to supervised learning algorithms such as simple linear regression, the classical multilayer perceptron and more sophisticated deep convolutional networks. You will also explore image processing with recognition of hand written digit images, classification of images into different categories, and advanced objects recognition with related image annotations. An example of identification of salient points for face detection is also provided. Next you will be introduced to Recurrent Networks, which are optimized for processing sequence data such as text, audio or

time series. Following that, you will learn about unsupervised learning algorithms such as Autoencoders and the very popular Generative Adversarial Networks (GAN). You will also explore non-traditional uses of neural networks as Style Transfer. Finally, you will look at Reinforcement Learning and its application to AI game playing, another popular direction of research and application of neural networks. Style and approach This book is an easy-to-follow guide full of examples and real-world applications to help you gain an in-depth understanding of Keras. This book will showcase more than twenty working Deep Neural Networks coded in Python using Keras. **Learn Keras for Deep Neural Networks** - Jojo Moolayil 2018-12-07 Learn, understand, and implement deep neural networks in a math- and programming-friendly approach using Keras and Python. The book focuses on an end-to-end approach to developing supervised learning algorithms in regression and

classification with practical business-centric use-cases implemented in Keras. The overall book comprises three sections with two chapters in each section. The first section prepares you with all the necessary basics to get started in deep learning. Chapter 1 introduces you to the world of deep learning and its difference from machine learning, the choices of frameworks for deep learning, and the Keras ecosystem. You will cover a real-life business problem that can be solved by supervised learning algorithms with deep neural networks. You'll tackle one use case for regression and another for classification leveraging popular Kaggle datasets. Later, you will see an interesting and challenging part of deep learning: hyperparameter tuning; helping you further improve your models when building robust deep learning applications. Finally, you'll further hone your skills in deep learning and cover areas of active development and research in deep learning. At the end of *Learn Keras for Deep Neural Networks*, you will have a thorough

understanding of deep learning principles and have practical hands-on experience in developing enterprise-grade deep learning solutions in Keras. *What You'll Learn* Master fast-paced practical deep learning concepts with math- and programming-friendly abstractions. Design, develop, train, validate, and deploy deep neural networks using the Keras framework Use best practices for debugging and validating deep learning models Deploy and integrate deep learning as a service into a larger software service or product Extend deep learning principles into other popular frameworks *Who This Book Is For* Software engineers and data engineers with basic programming skills in any language and who are keen on exploring deep learning for a career move or an enterprise project.

Mastering Machine Learning with Python in Six Steps - Manohar Swamynathan 2017-06-05 Master machine learning with Python in six steps and explore fundamental to advanced

topics, all designed to make you a worthy practitioner. This book's approach is based on the "Six degrees of separation" theory, which states that everyone and everything is a maximum of six steps away. Mastering Machine Learning with Python in Six Steps presents each topic in two parts: theoretical concepts and practical implementation using suitable Python packages. You'll learn the fundamentals of Python programming language, machine learning history, evolution, and the system development frameworks. Key data mining/analysis concepts, such as feature dimension reduction, regression, time series forecasting and their efficient implementation in Scikit-learn are also covered. Finally, you'll explore advanced text mining techniques, neural networks and deep learning techniques, and their implementation. All the code presented in the book will be available in the form of iPython notebooks to enable you to try out these examples and extend them to your advantage.

What You'll Learn Examine the fundamentals of Python programming language Review machine Learning history and evolution Understand machine learning system development frameworks Implement supervised/unsupervised/reinforcement learning techniques with examples Explore fundamental to advanced text mining techniques Implement various deep learning frameworks Who This Book Is For Python developers or data engineers looking to expand their knowledge or career into machine learning area. Non-Python (R, SAS, SPSS, Matlab or any other language) machine learning practitioners looking to expand their implementation skills in Python. Novice machine learning practitioners looking to learn advanced topics, such as hyperparameter tuning, various ensemble techniques, natural language processing (NLP), deep learning, and basics of reinforcement learning.

Practical Automated Machine Learning on Azure - Deepak Mukunthu 2019-09-23

Develop smart applications without spending days and weeks building machine-learning models. With this practical book, you'll learn how to apply automated machine learning (AutoML), a process that uses machine learning to help people build machine learning models. Deepak Mukunthu, Parashar Shah, and Wee Hyong Tok provide a mix of technical depth, hands-on examples, and case studies that show how customers are solving real-world problems with this technology. Building machine-learning models is an iterative and time-consuming process. Even those who know how to create ML models may be limited in how much they can explore. Once you complete this book, you'll understand how to apply AutoML to your data right away. Learn how companies in different industries are benefiting from AutoML Get started with AutoML using Azure Explore aspects such as algorithm selection, auto featurization, and hyperparameter tuning Understand how data analysts, BI professions,

developers can use AutoML in their familiar tools and experiences Learn how to get started using AutoML for use cases including classification, regression, and forecasting.

Deep Learning with Keras - Frank Millstein
2020-07-07

Deep Learning with Keras This book will introduce you to various supervised and unsupervised deep learning algorithms like the multilayer perceptron, linear regression and other more advanced deep convolutional and recurrent neural networks. You will also learn about image processing, handwritten recognition, object recognition and much more. Furthermore, you will get familiar with recurrent neural networks like LSTM and GAN as you explore processing sequence data like time series, text, and audio. The book will definitely be your best companion on this great deep learning journey with Keras introducing you to the basics you need to know in order to take next steps and learn more advanced deep

neural networks. Here Is a Preview of What You'll Learn Here... The difference between deep learning and machine learning Deep neural networks Convolutional neural networks Building deep learning models with Keras Multi-layer perceptron network models Activation functions Handwritten recognition using MNIST Solving multi-class classification problems Recurrent neural networks and sequence classification And much more... Get this book NOW and learn more about Deep Learning with Keras!

[Machine Learning for Healthcare Analytics Projects](#) - Eduonix Learning Solutions

2018-10-30

Create real-world machine learning solutions using NumPy, pandas, matplotlib, and scikit-learn Key FeaturesDevelop a range of healthcare analytics projects using real-world datasetsImplement key machine learning algorithms using a range of libraries from the Python ecosystemAccomplish intermediate-to-

complex tasks by building smart AI applications using neural network methodologiesBook Description Machine Learning (ML) has changed the way organizations and individuals use data to improve the efficiency of a system. ML algorithms allow strategists to deal with a variety of structured, unstructured, and semi-structured data. Machine Learning for Healthcare Analytics Projects is packed with new approaches and methodologies for creating powerful solutions for healthcare analytics. This book will teach you how to implement key machine learning algorithms and walk you through their use cases by employing a range of libraries from the Python ecosystem. You will build five end-to-end projects to evaluate the efficiency of Artificial Intelligence (AI) applications for carrying out simple-to-complex healthcare analytics tasks. With each project, you will gain new insights, which will then help you handle healthcare data efficiently. As you make your way through the book, you will use

ML to detect cancer in a set of patients using support vector machines (SVMs) and k-Nearest neighbors (KNN) models. In the final chapters, you will create a deep neural network in Keras to predict the onset of diabetes in a huge dataset of patients. You will also learn how to predict heart diseases using neural networks. By the end of this book, you will have learned how to address long-standing challenges, provide specialized solutions for how to deal with them, and carry out a range of cognitive tasks in the healthcare domain. What you will learn

Explore super imaging and natural language processing (NLP) to classify DNA sequencing

Detect cancer based on the cell information provided to the SVM

Apply supervised learning techniques to diagnose autism spectrum disorder (ASD)

Implement a deep learning grid and deep neural networks for detecting diabetes

Analyze data from blood pressure, heart rate, and cholesterol level tests using neural networks

Use ML algorithms to detect autistic disorders

Who

this book is for Machine Learning for Healthcare Analytics Projects is for data scientists, machine learning engineers, and healthcare professionals who want to implement machine learning algorithms to build smart AI applications. Basic knowledge of Python or any programming language is expected to get the most from this book.

Neural Network Projects with Python - James Loy 2019-02-28

Build your Machine Learning portfolio by creating 6 cutting-edge Artificial Intelligence projects using neural networks in Python

Key Features

Discover neural network architectures (like CNN and LSTM) that are driving recent advancements in AI

Build expert neural networks in Python using popular libraries such as Keras

Includes projects such as object detection, face identification, sentiment analysis, and more

Book Description

Neural networks are at the core of recent AI advances, providing some of the best resolutions to many real-world

problems, including image recognition, medical diagnosis, text analysis, and more. This book goes through some basic neural network and deep learning concepts, as well as some popular libraries in Python for implementing them. It contains practical demonstrations of neural networks in domains such as fare prediction, image classification, sentiment analysis, and more. In each case, the book provides a problem statement, the specific neural network architecture required to tackle that problem, the reasoning behind the algorithm used, and the associated Python code to implement the solution from scratch. In the process, you will gain hands-on experience with using popular Python libraries such as Keras to build and train your own neural networks from scratch. By the end of this book, you will have mastered the different neural network architectures and created cutting-edge AI projects in Python that will immediately strengthen your machine learning portfolio. What you will learn

various neural network architectures and its advancements in AI Master deep learning in Python by building and training neural network Master neural networks for regression and classification Discover convolutional neural networks for image recognition Learn sentiment analysis on textual data using Long Short-Term Memory Build and train a highly accurate facial recognition security system Who this book is for This book is a perfect match for data scientists, machine learning engineers, and deep learning enthusiasts who wish to create practical neural network projects in Python. Readers should already have some basic knowledge of machine learning and neural networks.

Data Analytics - Anthony Williams 2017-08-11
A Book Bundle of Data Analytics for Beginners AND Deep Learning with Keras Data Analytics for Beginners: Introduction to Data Analytics Knowing the data generated by your business every day is a key to success in the Data Analytic World that you are competing in. As there is so

much data so, the organizations need to collect and store them. The data becomes valuable to businesses when it is analyzed. Prior to the recent rise in analytics, businesses and organizations did not have the capacity to analyze a great deal of data, so a relatively small amount was maintained. In today's data-driven world, anything and everything may have significance, so there has been an attempt to record and keep virtually any data that we have the capacity to collect; and we have a great deal of capacity. There is so much to learn in this bundle about data analytics and I do invite you to grab your copy today and get started! Deep Learning with Keras: Introduction to Deep Learning with Keras This book will introduce you to various deep learning models in Keras, and you will see how different neural networks can be used in real-world examples as well as in various scientific fields. You will explore various Keras algorithms like the simplest linear regression or more complex deep convolutional

network. You will get to know what is the difference between supervised and unsupervised deep learning and you will be able to implement various algorithms in Keras by yourself as you follow step-by-step guide in this book. You will explore various applications of deep learning models such as speech recognition systems, natural language processing, and video game development. A whole new world will open in front of you since, by the time you reach the final page of this book, you will be a Keras expert and ready for your deep-learning projects. By reading this BOOK BUNDLE you will discover... Data Analytics for Beginners: Putting Data Analytics to Work The Rise of Data Analytics Big Data Defined Cluster Analysis Applications of Cluster Analysis Commonly Graphed Information Data Visualization Four Important Features of Data Visualization Software Big Data Impact Envisaged by 2020 Pros and Cons of Big Data Analytics And of course much more! Deep Learning with Keras:

Deep Neural Network Neural Network Elements
Keras Models Sequential Model Functional API
Model Keras Layers Core Keras Layers
Convolutional Keras Layers Recurrent Keras
Layers Deep Learning Algorithms Supervised
Learning Algorithms Applications of Deep
Learning Models Automatic Speech and Image
Recognition Natural Language Processing Video
Game Development Real World Applications And
of course much more! Get this BOOK BUNDLE
now and SAVE MONEY!!

Mastering Machine Learning with Python in Six Steps - Manohar Swamynathan 2019-10-01

Explore fundamental to advanced Python 3 topics in six steps, all designed to make you a worthy practitioner. This updated version's approach is based on the "six degrees of separation" theory, which states that everyone and everything is a maximum of six steps away and presents each topic in two parts: theoretical concepts and practical implementation using suitable Python 3 packages. You'll start with the

fundamentals of Python 3 programming language, machine learning history, evolution, and the system development frameworks. Key data mining/analysis concepts, such as exploratory analysis, feature dimension reduction, regressions, time series forecasting and their efficient implementation in Scikit-learn are covered as well. You'll also learn commonly used model diagnostic and tuning techniques. These include optimal probability cutoff point for class creation, variance, bias, bagging, boosting, ensemble voting, grid search, random search, Bayesian optimization, and the noise reduction technique for IoT data. Finally, you'll review advanced text mining techniques, recommender systems, neural networks, deep learning, reinforcement learning techniques and their implementation. All the code presented in the book will be available in the form of iPython notebooks to enable you to try out these examples and extend them to your advantage. What You'll Learn Understand machine learning

development and frameworks
Assess model diagnosis and tuning in machine learning
Examine text mining, natural language processing (NLP), and recommender systems
Review reinforcement learning and CNN
Who This Book Is For Python developers, data engineers, and machine learning engineers looking to expand their knowledge or career into machine learning area.

Machine Learning mit Python und Keras, TensorFlow 2 und Scikit-learn - Sebastian Raschka / Vahid Mirjalili 2021-03-03

- Datenanalyse mit ausgereiften statistischen Modellen des Machine Learnings
- Anwendung der wichtigsten Algorithmen und Python-Bibliotheken wie NumPy, SciPy, Scikit-learn, Keras, TensorFlow 2, Pandas und Matplotlib
- Best Practices zur Optimierung Ihrer Machine-Learning-Algorithmen

Mit diesem Buch erhalten Sie eine umfassende Einführung in die Grundlagen und den effektiven Einsatz von Machine-Learning- und Deep-Learning-

Algorithmen und wenden diese anhand zahlreicher Beispiele praktisch an. Dafür setzen Sie ein breites Spektrum leistungsfähiger Python-Bibliotheken ein, insbesondere Keras, TensorFlow 2 und Scikit-learn. Auch die für die praktische Anwendung unverzichtbaren mathematischen Konzepte werden verständlich und anhand zahlreicher Diagramme anschaulich erläutert. Die dritte Auflage dieses Buchs wurde für TensorFlow 2 komplett aktualisiert und berücksichtigt die jüngsten Entwicklungen und Technologien, die für Machine Learning, Neuronale Netze und Deep Learning wichtig sind. Dazu zählen insbesondere die neuen Features der Keras-API, das Synthetisieren neuer Daten mit Generative Adversarial Networks (GANs) sowie die Entscheidungsfindung per Reinforcement Learning. Ein sicherer Umgang mit Python wird vorausgesetzt.

Applied Deep Learning with Python - Alex Galea 2018-08-31

A hands-on guide to deep learning that's filled with intuitive explanations and engaging practical examples

Key Features Designed to iteratively develop the skills of Python users who don't have a data science background

Covers the key foundational concepts you'll need to know when building deep learning systems

Full of step-by-step exercises and activities to help build the skills that you need for the real-world

Book Description Taking an approach that uses the latest developments in the Python ecosystem, you'll first be guided through the Jupyter ecosystem, key visualization libraries and powerful data sanitization techniques before we train our first predictive model. We'll explore a variety of approaches to classification like support vector networks, random decision forests and k-nearest neighbours to build out your understanding before we move into more complex territory. It's okay if these terms seem overwhelming; we'll show you how to put them to work. We'll build upon our classification

coverage by taking a quick look at ethical web scraping and interactive visualizations to help you professionally gather and present your analysis. It's after this that we start building out our keystone deep learning application, one that aims to predict the future price of Bitcoin based on historical public data. By guiding you through a trained neural network, we'll explore common deep learning network architectures (convolutional, recurrent, generative adversarial) and branch out into deep reinforcement learning before we dive into model optimization and evaluation. We'll do all of this whilst working on a production-ready web application that combines Tensorflow and Keras to produce a meaningful user-friendly result, leaving you with all the skills you need to tackle and develop your own real-world deep learning projects confidently and effectively. What you will learn

Discover how you can assemble and clean your very own datasets

Develop a tailored machine learning classification strategy

Build,

train and enhance your own models to solve unique problems Work with production-ready frameworks like Tensorflow and Keras Explain how neural networks operate in clear and simple terms Understand how to deploy your predictions to the web Who this book is for If you're a Python programmer stepping into the world of data science, this is the ideal way to get started.

Python Programming - Frank Millstein
2020-09-07

Programming With Python - 8 BOOK BUNDLE!!
Deep Learning With Keras Here Is A Preview Of What You'll Learn Here... The difference between deep learning and machine learning
Deep neural networks Convolutional neural networks Building deep learning models with Keras Multi-layer perceptron network models And much more... Convolutional Neural Networks In Python Here Is A Preview Of What You'll Learn Here... Convolutional neural networks structure How convolutional neural

networks actually work Convolutional neural networks applications The importance of convolution operator How to build a simple image classification CNN And much, much more! Python Machine Learning Here Is A Preview Of What You'll Learn Here... Basics behind machine learning techniques Most commonly used machine learning algorithms, linear and logistic regression, decision trees support vector machines, k-nearest neighbors, random forests Solving multi-classification problems Data visualization with Matplotlib and data transformation with Pandas and Scikit-learn Solving multi-label classification problems And much, much more... Machine Learning With TensorFlow Here Is A Preview Of What You'll Learn Here... What is machine learning Main uses and benefits of machine learning How to get started with TensorFlow, installing and loading data Data flow graphs and basic TensorFlow expressions Creating MNIST classifiers with one-hot transformation And

much, much more... Data Analytics With Python Here Is A Preview Of What You'll Learn Here... What is Data Analytics? Difference between data science, big data and data analytics Installing python Python data structures Pandas series and data frames And much, much more... Natural Language Processing With Python Here Is A Preview Of What You'll Learn Here... Challenges of natural language processing How natural language processing works? Part of speech tagging N-grams Running natural language processing script And much, much more... DevOps Handbook Here Is A Preview Of What You'll Learn Here... Issues and mistakes plaguing software development What is software development life cycle? How software development life cycle works? The origins of devops Testing and building systems tools And much, much more... DevOps Adoption Here Is A Preview Of What You'll Learn Here... Devops definition Overcoming traditional dev and ops Devops and security integration Devops success

factors Is devops right for you? And much, much more... Get this book bundle NOW and SAVE money!

Python Machine Learning Blueprints - Alexander Combs 2019-01-31

Discover a project-based approach to mastering machine learning concepts by applying them to everyday problems using libraries such as scikit-learn, TensorFlow, and Keras Key Features Get to grips with Python's machine learning libraries including scikit-learn, TensorFlow, and Keras Implement advanced concepts and popular machine learning algorithms in real-world projects Build analytics, computer vision, and neural network projects Book Description Machine learning is transforming the way we understand and interact with the world around us. This book is the perfect guide for you to put your knowledge and skills into practice and use the Python ecosystem to cover key domains in machine learning. This second edition covers a range of libraries from the Python ecosystem,

including TensorFlow and Keras, to help you implement real-world machine learning projects. The book begins by giving you an overview of machine learning with Python. With the help of complex datasets and optimized techniques, you'll go on to understand how to apply advanced concepts and popular machine learning algorithms to real-world projects. Next, you'll cover projects from domains such as predictive analytics to analyze the stock market and recommendation systems for GitHub repositories. In addition to this, you'll also work on projects from the NLP domain to create a custom news feed using frameworks such as scikit-learn, TensorFlow, and Keras. Following this, you'll learn how to build an advanced chatbot, and scale things up using PySpark. In the concluding chapters, you can look forward to exciting insights into deep learning and you'll even create an application using computer vision and neural networks. By the end of this book, you'll be able to analyze data seamlessly and

make a powerful impact through your projects. What you will learn

- Understand the Python data science stack and commonly used algorithms
- Build a model to forecast the performance of an Initial Public Offering (IPO) over an initial discrete trading window
- Understand NLP concepts by creating a custom news feed
- Create applications that will recommend GitHub repositories based on ones you've starred, watched, or forked
- Gain the skills to build a chatbot from scratch using PySpark
- Develop a market-prediction app using stock data
- Delve into advanced concepts such as computer vision, neural networks, and deep learning

Who this book is for This book is for machine learning practitioners, data scientists, and deep learning enthusiasts who want to take their machine learning skills to the next level by building real-world projects. The intermediate-level guide will help you to implement libraries from the Python ecosystem to build a variety of projects addressing various machine learning

domains. Knowledge of Python programming and machine learning concepts will be helpful.

Multimedia Computing Systems and Virtual Reality - Rajeev Tiwari 2022-04-06

Most events and activities in today's world are ordinarily captured using photos, videos and other multimedia content. Such content has some limitation of storing data and fetching them effectively. Three-dimensional continuous PC animation is the most proper media to simulate these occasions and activities. This book focuses on futuristic trends and innovations in multimedia systems using big data, IoT and cloud technologies. The authors present recent advancements in multimedia systems as they relate to various application areas such as healthcare services and agriculture-related industries. The authors also discuss human-machine interface design, graphics modelling, rendering/animation, image/graphics techniques/systems and visualization. They then go on to explore multimedia content adaptation

for interoperable delivery. Finally, the book covers cultural heritage, philosophical/ethical/societal/international issues, standards-related virtual technology and multimedia uses. This book is intended for computer engineers and computer scientists developing applications for multimedia and virtual reality and professionals working in object design and visualization, transformation, modelling and animation of the real world. Features: Focuses on futuristic trends and innovations in multimedia systems using big data, IoT and cloud technologies Offers opportunity for state-of-the-art approaches, methodologies and systems, and innovative use of multimedia-based emerging technology services in different application areas Discusses human-machine interface design, graphics modelling, rendering/animation, image/graphics techniques/systems and visualization Covers cultural heritage, philosophical/ethical/societal/international

issues, standards-related virtual technology and multimedia uses Explores multimedia content adaptation for interoperable delivery and recent advancements in multimedia systems in context to various application areas such as healthcare services and agriculture-related fields Rajeev Tiwari is a Senior Associate Professor in the School of Computer Science at the University of Petroleum and Energy Studies, Dehradun, India. Neelam Duhan is an Associate Professor in the Department of Computer Engineering at J. C. Bose University of Science and Technology, YMCA, Faridabad, India. Mamta Mittal has 18 years of teaching experience, and her research areas include data mining, big data, machine learning, soft computing and data structure. Abhineet Anand is a Professor in the Computer Science and Engineering Department at Chitkara University, Punjab, India. Muhammad Attique Khan is a lecturer of the Computer Science Department at HITEC University, Taxila, Pakistan.

Big Data - Anthony S. Williams 2020-02-12
Big Data - 4 book BUNDLE!! Data Analytics for Beginners In this book you will learn: Putting Data Analytics to Work The Rise of Data Analytics Big Data Defined Cluster Analysis Applications of Cluster Analysis Commonly Graphed Information Data Visualization Four Important Features of Data Visualization Software Big Data Impact Envisaged by 2020 Pros and Cons of Big Data Analytics And of course much more! Deep Learning with Keras In this book you will learn: Deep Neural Network Neural Network Elements Keras Models Sequential Model Functional API Model Keras Layers Core Keras Layers Convolutional Keras Layers Recurrent Keras Layers Deep Learning Algorithms Supervised Learning Algorithms Applications of Deep Learning Models Automatic Speech and Image Recognition Natural Language Processing Video Game Development Real World Applications And of course much more! Analyzing Data with Power BI In this book

you will learn: Basics of data analysis processes
Fundamental data analysis algorithms Basic of
data and text mining, data visualization and
business intelligence Techniques used for
analysing quantitative data Basic data analysis
tasks Conceptual, logical and physical data
models Power BI service and data modelling
Creating reports and visualizations in Power BI
Data transformation and data cleaning in Power
BI Real world applications of data analysis
Convolutional Neural Networks In Python In this
book you will learn: Architecture of
convolutional neural networks Solving computer
vision tasks using convolutional neural networks
Python and computer vision Automatic image
and speech recognition Theano and TenroFlow
image recognition How to use MNIST vision
dataset What are commonly used convolutional
filters Download this book bundle NOW and
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**Practical Machine Learning for Data
Analysis Using Python** - Abdulhamit Subasi

2020-06-05

Practical Machine Learning for Data Analysis
Using 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 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 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 real-world
case studies across various fields, including
biomedical signal analysis, healthcare, security,
economics, and finance. Moreover, it covers a
wide range of machine 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, engineers, and graduate students, to solve their own real-world problems. Offers a comprehensive overview of the application of machine learning tools in data analysis across a wide range of subject areas Teaches readers how to apply machine learning techniques to biomedical signals, financial data, and healthcare data Explores important classification and regression 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 spread across multiple dimensions and extract useful features Hands-on Cloud Analytics with Microsoft Azure Stack - Prashila Naik 2020-11-12

Explore and work with various Microsoft Azure services for real-time Data Analytics KEY FEATURES Understanding what Azure can do with your data Understanding the analytics services offered by Azure Understand how data

can be transformed to generate more data Understand what is done after a Machine Learning model is built Go through some Data Analytics real-world use cases DESCRIPTION Data is the key input for Analytics. Building and implementing data platforms such as Data Lakes, modern Data Marts, and Analytics at scale require the right cloud platform that Azure provides through its services. The book starts by sharing how analytics has evolved and continues to evolve. Following the introduction, you will deep dive into ingestion technologies. You will learn about Data processing services in Azure. You will next learn about what is meant by a Data Lake and understand how Azure Data Lake Storage is used for analytical workloads. You will then learn about critical services that will provide actual Machine Learning capabilities in Azure. The book also talks about Azure Data Catalog for cataloging, Azure AD for Access Management, Web Apps and PowerApps for cloud web applications, Cognitive services for

Speech, Vision, Search and Language, Azure VM for computing and Data Science VMs, Functions as serverless computing, Kubernetes and Containers as deployment options. Towards the end, the book discusses two use cases on Analytics. **WHAT WILL YOU LEARN** Explore and work with various Azure services Orchestrate and ingest data using Azure Data Factory Learn how to use Azure Stream Analytics Get to know more about Synapse Analytics and its features Learn how to use Azure Analysis Services and its functionalities **WHO THIS BOOK IS FOR** This book is for anyone who has basic to intermediate knowledge of cloud and analytics concepts and wants to use Microsoft Azure for Data Analytics. This book will also benefit Data Scientists who want to use Azure for Machine Learning. **TABLE OF CONTENTS** 1. Data and its power 2. Evolution of Analytics and its Types 3. Internet of Things 4. AI and ML 5. Why cloud 6. What are a data lake and a modern datamart 7. Introduction to Azure services 8. Types of data

9. Azure Data Factory 10. Stream Analytics 11. Azure Data Lake Store and Azure Storage 12. Cosmos DB 13. Synapse Analytics 14. Azure Databricks 15. Azure Analysis Services 16. Power BI 17. Azure Machine Learning 18. Sample Architectures and synergies - Real-Time and Batch 19. Azure Data Catalog 20. Azure Active Directory 21. Azure Webapps 22. Power apps 23. Time Series Insights 24. Azure Cognitive Services 25. Azure Logicapps 26. Azure VM 27. Azure Functions 28. Azure Containers 29. Azure Kubernetes Service 30. Use Case 1 31. Use Case 2

Advanced Deep Learning with R -

Bharatendra Rai 2019-12-17

Discover best practices for choosing, building, training, and improving deep learning models using Keras-R, and TensorFlow-R libraries Key Features Implement deep learning algorithms to build AI models with the help of tips and tricks Understand how deep learning models operate using expert techniques Apply reinforcement

learning, computer vision, GANs, and NLP using a range of datasets

Book Description Deep learning is a branch of machine learning based on a set of algorithms that attempt to model high-level abstractions in data. Advanced Deep Learning with R will help you understand popular deep learning architectures and their variants in R, along with providing real-life examples for them. This deep learning book starts by covering the essential deep learning techniques and concepts for prediction and classification. You will learn about neural networks, deep learning architectures, and the fundamentals for implementing deep learning with R. The book will also take you through using important deep learning libraries such as Keras-R and TensorFlow-R to implement deep learning algorithms within applications. You will get up to speed with artificial neural networks, recurrent neural networks, convolutional neural networks, long short-term memory networks, and more using advanced examples. Later, you'll

discover how to apply generative adversarial networks (GANs) to generate new images; autoencoder neural networks for image dimension reduction, image de-noising and image correction and transfer learning to prepare, define, train, and model a deep neural network. By the end of this book, you will be ready to implement your knowledge and newly acquired skills for applying deep learning algorithms in R through real-world examples.

What you will learn

- Learn how to create binary and multi-class deep neural network models
- Implement GANs for generating new images
- Create autoencoder neural networks for image dimension reduction, image de-noising and image correction
- Implement deep neural networks for performing efficient text classification
- Learn to define a recurrent convolutional network model for classification in Keras
- Explore best practices and tips for performance optimization of various deep learning models

Who this book is for This book is

for data scientists, machine learning practitioners, deep learning researchers and AI enthusiasts who want to develop their skills and knowledge to implement deep learning techniques and algorithms using the power of R. A solid understanding of machine learning and working knowledge of the R programming language are required.

Data Analytics - Anthony S. Williams 2020-02-12

A Book Bundle of Data Analytics for Beginners AND Deep Learning with Keras Data Analytics for Beginners: Introduction to Data Analytics Knowing the data generated by your business every day is a key to success in the Data Analytic World that you are competing in. As there is so much data so, the organizations need to collect and store them. The data becomes valuable to businesses when it is analyzed. Prior to the recent rise in analytics, businesses and organizations did not have the capacity to analyze a great deal of data, so a relatively small amount was maintained. In today's data-driven

world, anything and everything may have significance, so there has been an attempt to record and keep virtually any data that we have the capacity to collect; and we have a great deal of capacity. There is so much to learn in this bundle about data analytics and I do invite you to grab your copy today and get started! Deep Learning with Keras: Introduction to Deep Learning with Keras This book will introduce you to various deep learning models in Keras, and you will see how different neural networks can be used in real-world examples as well as in various scientific fields. You will explore various Keras algorithms like the simplest linear regression or more complex deep convolutional network. You will get to know what is the difference between supervised and unsupervised deep learning and you will be able to implement various algorithms in Keras by yourself as you follow step-by-step guide in this book. You will explore various applications of deep learning models such as speech recognition systems,

natural language processing, and video game development. A whole new world will open in front of you since, by the time you reach the final page of this book, you will be a Keras expert and ready for your deep-learning projects. By downloading this BOOK BUNDLE you will discover... Data Analytics for Beginners: Putting Data Analytics to Work The Rise of Data Analytics Big Data Defined Cluster Analysis Applications of Cluster Analysis Commonly Graphed Information Data Visualization Four Important Features of Data Visualization Software Big Data Impact Envisaged by 2020 Pros and Cons of Big Data Analytics And of course much more! Deep Learning with Keras: Deep Neural Network Neural Network Elements Keras Models Sequential Model Functional API Model Keras Layers Core Keras Layers Convolutional Keras Layers Recurrent Keras Layers Deep Learning Algorithms Supervised Learning Algorithms Applications of Deep Learning Models Automatic Speech and Image

Recognition Natural Language Processing Video Game Development Real World Applications And of course much more! Download this BOOK BUNDLE now and SAVE MONEY!!
Data Analytics - Anthony Williams 2017-11-06
Data Analytics - 7 BOOK BUNDLE!! Book 1: Data Analytics for Beginners In this book you will learn: Putting Data Analytics to Work The Rise of Data Analytics Big Data Defined Cluster Analysis Applications of Cluster Analysis Commonly Graphed Information Data Visualization Four Important Features of Data Visualization Software And of course much more! Book 2: Deep Learning with Keras In this book you will learn: Deep Neural Network Neural Network Elements Keras Models Sequential Model Functional API Model Keras Layers Core Keras Layers Convolutional Keras Layers Recurrent Keras Layers Deep Learning Algorithms Supervised Learning Algorithms Applications of Deep Learning Models Automatic Speech and Image Recognition Natural Language Processing

And of course much more! Book 3: Analyzing Data with Power BI In this book you will learn: Basics of data analysis processes Fundamental data analysis algorithms Basic of data and text mining, data visualization and business intelligence Techniques used for analysing quantitative data Basic data analysis tasks Conceptual, logical and physical data models Power BI service and data modelling Creating reports and visualizations in Power BI And of course much more! Book 4: Reinforcement Learning with Python In this book you will learn: Types of fundamental machine learning algorithms in comparison to reinforcement learning Essentials of reinforcement learning process Markov decision processes and basic parameters How to integrate reinforcement learning algorithm using OpenAI Gym How to integrate Monte Carlo methods for prediction Monte Carlo tree search And much, much more... Book 5: Artificial Intelligence Python In this book you will learn: Different artificial

intelligence approaches and goals How to define AI system Basic AI techniques Reinforcement learning And much, much more... Book 6: Text Analytics with Python In this book you will learn: Text analytics process How to build a corpus and analyze sentiment Named entity extraction with Groningen meaning bank corpus How to train your system Getting started with NLTK How to search syntax and tokenize sentences Automatic text summarization Stemming word and topic modeling with NLTK And much, much more... Book 7: Convolutional Neural Networks in Python In this book you will learn: Architecture of convolutional neural networks Solving computer vision tasks using convolutional neural networks Python and computer vision Automatic image and speech recognition Theano and TensorFlow image recognition And of course much more! Get this book bundle NOW and SAVE money!!
[Python Machine Learning](#) - Sebastian Raschka
2015-09-23

Unlock deeper insights into Machine Learning with this vital guide to cutting-edge predictive analytics About This Book Leverage Python's most powerful open-source libraries for deep learning, data wrangling, and data visualization Learn effective strategies and best practices to improve and optimize machine learning systems and algorithms Ask - and answer - tough questions of your data with robust statistical models, built for a range of datasets Who This Book Is For If you want to find out how to use Python to start answering critical questions of your data, pick up Python Machine Learning - whether you want to get started from scratch or want to extend your data science knowledge, this is an essential and unmissable resource. What You Will Learn Explore how to use different machine learning models to ask different questions of your data Learn how to build neural networks using Keras and Theano Find out how to write clean and elegant Python code that will optimize the strength of your

algorithms Discover how to embed your machine learning model in a web application for increased accessibility Predict continuous target outcomes using regression analysis Uncover hidden patterns and structures in data with clustering Organize data using effective pre-processing techniques Get to grips with sentiment analysis to delve deeper into textual and social media data In Detail Machine learning and predictive analytics are transforming the way businesses and other organizations operate. Being able to understand trends and patterns in complex data is critical to success, becoming one of the key strategies for unlocking growth in a challenging contemporary marketplace. Python can help you deliver key insights into your data - its unique capabilities as a language let you build sophisticated algorithms and statistical models that can reveal new perspectives and answer key questions that are vital for success. Python Machine Learning gives you access to the world of predictive analytics

and demonstrates why Python is one of the world's leading data science languages. If you want to ask better questions of data, or need to improve and extend the capabilities of your machine learning systems, this practical data science book is invaluable. Covering a wide range of powerful Python libraries, including scikit-learn, Theano, and Keras, and featuring guidance and tips on everything from sentiment analysis to neural networks, you'll soon be able to answer some of the most important questions facing you and your organization. Style and approach Python Machine Learning connects the fundamental theoretical principles behind machine learning to their practical application in a way that focuses you on asking and answering the right questions. It walks you through the key elements of Python and its powerful machine learning libraries, while demonstrating how to get to grips with a range of statistical models.

Cloud Computing for Machine Learning and Cognitive Applications - Kai Hwang

2017-06-16

The first textbook to teach students how to build data analytic solutions on large data sets using cloud-based technologies. This is the first textbook to teach students how to build data analytic solutions on large data sets (specifically in Internet of Things applications) using cloud-based technologies for data storage, transmission and mashup, and AI techniques to analyze this data. This textbook is designed to train college students to master modern cloud computing systems in operating principles, architecture design, machine learning algorithms, programming models and software tools for big data mining, analytics, and cognitive applications. The book will be suitable for use in one-semester computer science or electrical engineering courses on cloud computing, machine learning, cloud programming, cognitive computing, or big data science. The book will also be very useful as a reference for professionals who want to work in

cloud computing and data science. Cloud and Cognitive Computing begins with two introductory chapters on fundamentals of cloud computing, data science, and adaptive computing that lay the foundation for the rest of the book. Subsequent chapters cover topics including cloud architecture, mashup services, virtual machines, Docker containers, mobile clouds, IoT and AI, inter-cloud mashups, and cloud performance and benchmarks, with a focus on Google's Brain Project, DeepMind, and X-Lab programs, IBKai HwangM SyNapsee, Bluemix programs, cognitive initiatives, and neurocomputers. The book then covers machine learning algorithms and cloud programming software tools and application development, applying the tools in machine learning, social media, deep learning, and cognitive applications. All cloud systems are illustrated with big data and cognitive application examples.

Data Analysis - Anthony Williams 2017-07-11
A Book Bundle of Data Analytics for Beginners

AND Deep Learning with Keras Get this Paperback now AND get the ebook for FREE!!
Data Analytics for Beginners: Introduction to Data Analytics Knowing the data generated by your business every day is a key to success in the Data Analytic World that you are competing in. As there is so much data so, the organizations need to collect and store them. The data becomes valuable to businesses when it is analyzed. Prior to the recent rise in analytics, businesses and organizations did not have the capacity to analyze a great deal of data, so a relatively small amount was maintained. In today's data-driven world, anything and everything may have significance, so there has been an attempt to record and keep virtually any data that we have the capacity to collect; and we have a great deal of capacity. There is so much to learn in this bundle about data analytics and I do invite you to grab your copy today and get started! Deep Learning with Keras: Introduction to Deep Learning with Keras This book will

introduce you to various deep learning models in Keras, and you will see how different neural networks can be used in real-world examples as well as in various scientific fields. You will explore various Keras algorithms like the simplest linear regression or more complex deep convolutional network. You will get to know what is the difference between supervised and unsupervised deep learning and you will be able to implement various algorithms in Keras by yourself as you follow step-by-step guide in this book. You will explore various applications of deep learning models such as speech recognition systems, natural language processing, and video game development. A whole new world will open in front of you since, by the time you reach the final page of this book, you will be a Keras expert and ready for your deep-learning projects. By Purchasing this BOOK BUNDLE you will discover... Data Analytics for Beginners: Putting Data Analytics to Work The Rise of Data Analytics Big Data Defined Cluster Analysis

Applications of Cluster Analysis Commonly Graphed Information Data Visualization Four Important Features of Data Visualization Software Big Data Impact Envisaged by 2020 Pros and Cons of Big Data Analytics And of course much more! Deep Learning with Keras: Deep Neural Network Neural Network Elements Keras Models Sequential Model Functional API Model Keras Layers Core Keras Layers Convolutional Keras Layers Recurrent Keras Layers Deep Learning Algorithms Supervised Learning Algorithms Applications of Deep Learning Models Automatic Speech and Image Recognition Natural Language Processing Video Game Development Real World Applications And of course much more! Get this BOOK BUNDLE now and SAVE MONEY!!

2018 4th International Conference on Computing Communication and Automation (ICCCA) - IEEE Staff 2018-12-14
School of Computing Science & Engineering of Galgotias University Uttar Pradesh, invites you

to associate with us for upcoming conference, ICCCA2018, a two day International Conference to be held on December 14 15, 2018 ICCCA2018 International Conference on Computing, Communication and Automation team with pleasure invites you to contribute with original research papers, to this blind and peer reviewed conference

Codeless Deep Learning with KNIME - Kathrin Melcher 2020-11-27

Discover how to integrate KNIME Analytics Platform with deep learning libraries to implement artificial intelligence solutions Key Features Become well-versed with KNIME Analytics Platform to perform codeless deep learning Design and build deep learning workflows quickly and more easily using the KNIME GUI Discover different deployment options without using a single line of code with KNIME Analytics Platform Book Description KNIME Analytics Platform is an open source software used to create and design data science

workflows. This book is a comprehensive guide to the KNIME GUI and KNIME deep learning integration, helping you build neural network models without writing any code. It'll guide you in building simple and complex neural networks through practical and creative solutions for solving real-world data problems. Starting with an introduction to KNIME Analytics Platform, you'll get an overview of simple feed-forward networks for solving simple classification problems on relatively small datasets. You'll then move on to build, train, test, and deploy more complex networks, such as autoencoders, recurrent neural networks (RNNs), long short-term memory (LSTM), and convolutional neural networks (CNNs). In each chapter, depending on the network and use case, you'll learn how to prepare data, encode incoming data, and apply best practices. By the end of this book, you'll have learned how to design a variety of different neural architectures and will be able to train, test, and deploy the final network. What you will

learnUse various common nodes to transform your data into the right structure suitable for training a neural networkUnderstand neural network techniques such as loss functions, backpropagation, and hyperparametersPrepare and encode data appropriately to feed it into the networkBuild and train a classic feedforward networkDevelop and optimize an autoencoder network for outlier detectionImplement deep learning networks such as CNNs, RNNs, and LSTM with the help of practical examplesDeploy a trained deep learning network on real-world dataWho this book is for This book is for data analysts, data scientists, and deep learning developers who are not well-versed in Python but want to learn how to use KNIME GUI to build, train, test, and deploy neural networks with different architectures. The practical implementations shown in the book do not require coding or any knowledge of dedicated scripts, so you can easily implement your knowledge into practical applications. No prior

experience of using KNIME is required to get started with this book.

Hands-On Predictive Analytics with Python -
Alvaro Fuentes 2018-12-28

Step-by-step guide to build high performing predictive applications Key FeaturesUse the Python data analytics ecosystem to implement end-to-end predictive analytics projectsExplore advanced predictive modeling algorithms with an emphasis on theory with intuitive explanationsLearn to deploy a predictive model's results as an interactive applicationBook Description Predictive analytics is an applied field that employs a variety of quantitative methods using data to make predictions. It involves much more than just throwing data onto a computer to build a model. This book provides practical coverage to help you understand the most important concepts of predictive analytics. Using practical, step-by-step examples, we build predictive analytics solutions while using cutting-edge Python tools and packages. The

book's step-by-step approach starts by defining the problem and moves on to identifying relevant data. We will also be performing data preparation, exploring and visualizing relationships, building models, tuning, evaluating, and deploying model. Each stage has relevant practical examples and efficient Python code. You will work with models such as KNN, Random Forests, and neural networks using the most important libraries in Python's data science stack: NumPy, Pandas, Matplotlib, Seaborn, Keras, Dash, and so on. In addition to hands-on code examples, you will find intuitive explanations of the inner workings of the main techniques and algorithms used in predictive analytics. By the end of this book, you will be all set to build high-performance predictive analytics solutions using Python programming. What you will learn

Get to grips with the main concepts and principles of predictive analytics

Learn about the stages involved in producing complete predictive analytics

solutions

Understand how to define a problem, propose a solution, and prepare a dataset

Use visualizations to explore relationships and gain insights into the dataset

Learn to build regression and classification models using scikit-learn

Use Keras to build powerful neural network models that produce accurate predictions

Learn to serve a model's predictions as a web application

Who this book is for This book is for data analysts, data scientists, data engineers, and Python developers who want to learn about predictive modeling and would like to implement predictive analytics solutions using Python's data stack. People from other backgrounds who would like to enter this exciting field will greatly benefit from reading this book. All you need is to be proficient in Python programming and have a basic understanding of statistics and college-level algebra.

Data Analytics - Anthony S. Williams 2020-02-12

Data Analytics - 7 BOOK BUNDLE!! Book 1: Data Analytics For Beginners In this book you will

learn: What is Data Analytics Types of Data Analytics Evolution of Data Analytics Big Data Defined Data Mining Data Visualization Cluster Analysis And of course much more! Book 2: Deep Learning With Keras In this book you will learn: Deep Neural Network Neural Network Elements Keras Models Sequential Model Functional API Model Keras Layers Core Keras Layers Convolutional Keras Layers Recurrent Keras Layers Deep Learning Algorithms Supervised Learning Algorithms Applications of Deep Learning Models Automatic Speech and Image Recognition Natural Language Processing And of course much more! Book 3: Analyzing Data With Power BI In this book you will learn: Basics of data analysis processes Fundamental data analysis algorithms Basic of data and text mining, data visualization, and business intelligence Techniques used for analysing quantitative data Basic data analysis tasks Conceptual, logical, and physical data models Power BI service and data modelling Creating

reports and visualizations in Power BI And of course much more! Book 4: Reinforcement Learning With Python In this book you will learn: Types of fundamental machine learning algorithms in comparison to reinforcement learning Essentials of reinforcement learning process Marko decision processes and basic parameters How to integrate reinforcement learning algorithm using OpenAI Gym How to integrate Monte Carlo methods for prediction Monte Carlo tree search And much, much more... Book 5: Artificial Intelligence Python In this book you will learn: Different artificial intelligence approaches and goals How to define AI system Basic AI techniques Reinforcement learning And much, much more... Book 6: Text Analytics With Python In this book you will learn: Text analytics process How to build a corpus and analyze sentiment Named entity extraction with Groningen meaning bank corpus How to train your system Getting started with NLTK How to search syntax and tokenize

sentences Automatic text summarization
Stemming word and topic modeling with NLTK
And much, much more... Book 7: Convolutional
Neural Networks In Python In this book you will
learn: Architecture of convolutional neural
networks Solving computer vision tasks using
convolutional neural networks Python and
computer vision Automatic image and speech
recognition Theano and Tenroeflow image
recognition And of course much more! Download
this book bundle NOW and SAVE money!!

Hands-On Transfer Learning with Python -
Dipanjan Sarkar 2018-08-31

Deep learning simplified by taking supervised,
unsupervised, and reinforcement learning to the
next level using the Python ecosystem Key
Features Build deep learning models with
transfer learning principles in Python implement
transfer learning to solve real-world research
problems Perform complex operations such as
image captioning neural style transfer Book
Description Transfer learning is a machine

learning (ML) technique where knowledge
gained during training a set of problems can be
used to solve other similar problems. The
purpose of this book is two-fold; firstly, we focus
on detailed coverage of deep learning (DL) and
transfer learning, comparing and contrasting the
two with easy-to-follow concepts and examples.
The second area of focus is real-world examples
and research problems using TensorFlow, Keras,
and the Python ecosystem with hands-on
examples. The book starts with the key essential
concepts of ML and DL, followed by depiction
and coverage of important DL architectures such
as convolutional neural networks (CNNs), deep
neural networks (DNNs), recurrent neural
networks (RNNs), long short-term memory
(LSTM), and capsule networks. Our focus then
shifts to transfer learning concepts, such as
model freezing, fine-tuning, pre-trained models
including VGG, inception, ResNet, and how
these systems perform better than DL models
with practical examples. In the concluding

chapters, we will focus on a multitude of real-world case studies and problems associated with areas such as computer vision, audio analysis and natural language processing (NLP). By the end of this book, you will be able to implement both DL and transfer learning principles in your own systems. What you will learn

- Set up your own DL environment with graphics processing unit (GPU) and Cloud support
- Delve into transfer learning principles with ML and DL models
- Explore various DL architectures, including CNN, LSTM, and capsule networks
- Learn about data and network representation and loss functions
- Get to grips with models and strategies in transfer learning
- Walk through potential challenges in building complex transfer learning models from scratch
- Explore real-world research problems related to computer vision and audio analysis
- Understand how transfer learning can be leveraged in NLP

Who this book is for

Hands-On Transfer Learning with Python is for data scientists, machine learning

engineers, analysts and developers with an interest in data and applying state-of-the-art transfer learning methodologies to solve tough real-world problems. Basic proficiency in machine learning and Python is required.

Video Analytics Using Deep Learning -

Debjyoti Paul 2020-01-13

Build analytics for video using TensorFlow, Keras, and YOLO. This book guides you through the field of deep learning starting with neural networks, taking a deep dive into convolutional neural networks, recurrent neural networks, and long short-term memory (LSTM) networks. Video Analytics Using Deep Learning closes with practical examples of building image filters and video masking using generative models. The examples within the book cover topics from domains such as traffic recognition for self-driving cars; face recognition and emotion analysis for retail analytics; object and tamper detection for safety and security; and image filters and video masking for social networks and

web applications. To enable you to make a smooth transition into deep learning, the book covers mathematical pre-requisites and includes an introduction to deep learning. You'll also cover topics such as storage of large video content for processing on the cloud and working with the connectors involved. All the code and samples in the book are provided as iPython. What You Will Learn Master TensorFlow, Keras, and YOLO Work with face recognition, age detection, and gender identification Apply CNN, RNN and generative models in deep learning Use emotion analysis and gesture detection Carry out traffic recognition in real-time Who This Book Is For Data scientists and machine learning developers looking to build applications based on video in finance, healthcare, automotive, transport, safety/security, and home automation. /div

Artificial Intelligence Trends for Data Analytics Using Machine Learning and Deep Learning Approaches - K. Gayathri Devi 2020-10-07

Artificial Intelligence (AI), when incorporated with machine learning and deep learning algorithms, has a wide variety of applications today. This book focuses on the implementation of various elementary and advanced approaches in AI that can be used in various domains to solve real-time decision-making problems. The book focuses on concepts and techniques used to run tasks in an automated manner. It discusses computational intelligence in the detection and diagnosis of clinical and biomedical images, covers the automation of a system through machine learning and deep learning approaches, presents data analytics and mining for decision-support applications, and includes case-based reasoning, natural language processing, computer vision, and AI approaches in real-time applications. Academic scientists, researchers, and students in the various domains of computer science engineering, electronics and communication engineering, and information technology, as well as industrial engineers,

biomedical engineers, and management, will find this book useful. By the end of this book, you will understand the fundamentals of AI. Various case studies will develop your adaptive thinking to solve real-time AI problems. Features Includes AI-based decision-making approaches Discusses computational intelligence in the detection and diagnosis of clinical and biomedical images Covers automation of systems through machine learning and deep learning approaches and its implications to the real world Presents data analytics and mining for decision-support applications Offers case-based reasoning

C, C++, Java, Python, PHP, JavaScript and Linux For Beginners - Manjunath.R

2020-04-13

"An Introduction to Programming Languages and Operating Systems for Novice Coders" An ideal addition to your personal elibrary. With the aid of this indispensable reference book, you may quickly gain a grasp of Python, Java, JavaScript, C, C++, CSS, Data Science, HTML,

LINUX and PHP. It can be challenging to understand the programming language's distinctive advantages and charms. Many programmers who are familiar with a variety of languages frequently approach them from a constrained perspective rather than enjoying their full expressivity. Some programmers incorrectly use Programmatic features, which can later result in serious issues. The programmatic method of writing programs—the ideal approach to use programming languages—is explained in this book. This book is for all programmers, whether you are a novice or an experienced pro. Its numerous examples and well paced discussions will be especially beneficial for beginners. Those who are already familiar with programming will probably gain more from this book, of course. I want you to be prepared to use programming to make a big difference. "C, C++, Java, Python, PHP, JavaScript and Linux For Beginners" is a comprehensive guide to programming languages

and operating systems for those who are new to the world of coding. This easy-to-follow book is designed to help readers learn the basics of programming and Linux operating system, and to gain confidence in their coding abilities. With clear and concise explanations, readers will be introduced to the fundamental concepts of programming languages such as C, C++, Java, Python, PHP, and JavaScript, as well as the basics of the Linux operating system. The book offers step-by-step guidance on how to write and execute code, along with practical exercises that help reinforce learning. Whether you are a student or a professional, "C, C++, Java, Python, PHP, JavaScript and Linux For Beginners" provides a solid foundation in programming and operating systems. By the end of this book, readers will have a solid understanding of the core concepts of programming and Linux, and will be equipped with the knowledge and skills to continue learning and exploring the exciting world of coding.

Big Data - Anthony Williams 2017-08-11
Big Data - 4 book BUNDLE!! Book 1: Data Analytics for Beginners In this book you will learn: Putting Data Analytics to Work The Rise of Data Analytics Big Data Defined Cluster Analysis Applications of Cluster Analysis Commonly Graphed Information Data Visualization Four Important Features of Data Visualization Software Big Data Impact Envisaged by 2020 Pros and Cons of Big Data Analytics And of course much more! Book 2: Deep Learning with Keras In this book you will learn: Deep Neural Network Neural Network Elements Keras Models Sequential Model Functional API Model Keras Layers Core Keras Layers Convolutional Keras Layers Recurrent Keras Layers Deep Learning Algorithms Supervised Learning Algorithms Applications of Deep Learning Models Automatic Speech and Image Recognition Natural Language Processing Video Game Development Real World Applications And of course much more! Book 3: Analyzing Data

with Power BI In this book you will learn: Basics of data analysis processes Fundamental data analysis algorithms Basic of data and text mining, data visualization and business intelligence Techniques used for analysing quantitative data Basic data analysis tasks Conceptual, logical and physical data models Power BI service and data modelling Creating reports and visualizations in Power BI Data transformation and data cleaning in Power BI Real world applications of data analysis Book 4: Convolutional Neural Networks in Python In this book you will learn: Architecture of convolutional neural networks Solving computer vision tasks using convolutional neural networks Python and computer vision Automatic image and speech recognition Theano and Tenroeflow image recognition How to use MNIST vision dataset What are commonly used convolutional filters Get this book bundle NOW and SAVE money!! Buy the Paperback version AND get this ebook bundle for FREE!!

Applied Supervised Learning with R - Karthik Ramasubramanian 2019-05-31

Learn the ropes of supervised machine learning with R by studying popular real-world use-cases, and understand how it drives object detection in driver less cars, customer churn, and loan default prediction. Key Features Study supervised learning algorithms by using real-world datasets Fine tune optimal parameters with hyperparameter optimization Select the best algorithm using the model evaluation framework Book Description R provides excellent visualization features that are essential for exploring data before using it in automated learning. Applied Supervised Learning with R helps you cover the complete process of employing R to develop applications using supervised machine learning algorithms for your business needs. The book starts by helping you develop your analytical thinking to create a problem statement using business inputs and domain research. You will then learn different

evaluation metrics that compare various algorithms, and later progress to using these metrics to select the best algorithm for your problem. After finalizing the algorithm you want to use, you will study the hyperparameter optimization technique to fine-tune your set of optimal parameters. To prevent you from overfitting your model, a dedicated section will even demonstrate how you can add various regularization terms. By the end of this book, you will have the advanced skills you need for modeling a supervised machine learning algorithm that precisely fulfills your business needs. What you will learn

Develop analytical thinking to precisely identify a business problem

Wrangle data with `dplyr`, `tidyr`, and `reshape2`

Visualize data with `ggplot2`

Validate your supervised machine learning model using k-fold

Optimize hyperparameters with grid and random search, and Bayesian optimization

Deploy your model on Amazon Web Services (AWS) Lambda with `plumber`

Improve

your model's performance with feature selection and dimensionality reduction

Who this book is for

This book is specially designed for novice and intermediate-level data analysts, data scientists, and data engineers who want to explore different methods of supervised machine learning and its various use cases. Some background in statistics, probability, calculus, linear algebra, and programming will help you thoroughly understand and follow the content of this book.

Data Science Solutions with Python - Tshepo Chris Nokeri 2021-10-26

Apply supervised and unsupervised learning to solve practical and real-world big data problems. This book teaches you how to engineer features, optimize hyperparameters, train and test models, develop pipelines, and automate the machine learning (ML) process. The book covers an in-memory, distributed cluster computing framework known as PySpark, machine learning framework platforms known as scikit-learn,

PySpark MLlib, H2O, and XGBoost, and a deep learning (DL) framework known as Keras. The book starts off presenting supervised and unsupervised ML and DL models, and then it examines big data frameworks along with ML and DL frameworks. Author Tshepo Chris Nokeri considers a parametric model known as the Generalized Linear Model and a survival regression model known as the Cox Proportional Hazards model along with Accelerated Failure Time (AFT). Also presented is a binary classification model (logistic regression) and an ensemble model (Gradient Boosted Trees). The book introduces DL and an artificial neural network known as the Multilayer Perceptron (MLP) classifier. A way of performing cluster analysis using the K-Means model is covered. Dimension reduction techniques such as Principal Components Analysis and Linear Discriminant Analysis are explored. And automated machine learning is unpacked. This book is for intermediate-level data scientists and

machine learning engineers who want to learn how to apply key big data frameworks and ML and DL frameworks. You will need prior knowledge of the basics of statistics, Python programming, probability theories, and predictive analytics. What You Will Learn Understand widespread supervised and unsupervised learning, including key dimension reduction techniques Know the big data analytics layers such as data visualization, advanced statistics, predictive analytics, machine learning, and deep learning Integrate big data frameworks with a hybrid of machine learning frameworks and deep learning frameworks Design, build, test, and validate skilled machine models and deep learning models Optimize model performance using data transformation, regularization, outlier remedying, hyperparameter optimization, and data split ratio alteration Who This Book Is For Data scientists and machine learning engineers with basic knowledge and understanding of

Python programming, probability theories, and predictive analytics

The Pandas Workshop - Blaine Bateman

2022-06-17

Learn the fundamentals of data science with Python by analyzing real datasets and solving problems using pandas

Key Features

- Learn how to apply data retrieval, transformation, visualization, and modeling techniques using pandas
- Become highly efficient in unlocking deeper insights from your data, including databases, web data, and more
- Build your experience and confidence with hands-on exercises and activities

Book Description

The Pandas Workshop will teach you how to be more productive with data and generate real business insights to inform your decision-making. You will be guided through real-world data science problems and shown how to apply key techniques in the context of realistic examples and exercises. Engaging activities will then challenge you to apply your new skills in a way

that prepares you for real data science projects. You'll see how experienced data scientists tackle a wide range of problems using data analysis with pandas. Unlike other Python books, which focus on theory and spend too long on dry, technical explanations, this workshop is designed to quickly get you to write clean code and build your understanding through hands-on practice. As you work through this Python pandas book, you'll tackle various real-world scenarios, such as using an air quality dataset to understand the pattern of nitrogen dioxide emissions in a city, as well as analyzing transportation data to improve bus transportation services. By the end of this data analytics book, you'll have the knowledge, skills, and confidence you need to solve your own challenging data science problems with pandas.

What you will learn

- Access and load data from different sources using pandas
- Work with a range of data types and structures to understand your data
- Perform data transformation to

prepare it for analysis • Use Matplotlib for data visualization to create a variety of plots • Create data models to find relationships and test hypotheses • Manipulate time-series data to perform date-time calculations • Optimize your code to ensure more efficient business data analysis Who this book is for This data analysis book is for anyone with prior experience working with the Python programming language who wants to learn the fundamentals of data analysis with pandas. Previous knowledge of pandas is not necessary.

Fundamentals of Machine Learning for Predictive Data Analytics, second edition -

John D. Kelleher 2020-10-20

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

including price prediction, risk assessment, predicting customer behavior, and document classification. This introductory textbook offers a detailed and focused treatment of the most important machine learning approaches used in predictive data analytics, covering both theoretical concepts and practical applications. Technical and mathematical material is augmented with explanatory worked examples, and case studies illustrate the application of these models in the broader business context. This second edition covers recent developments in machine learning, especially in a new chapter on deep learning, and two new chapters that go beyond predictive analytics to cover unsupervised learning and reinforcement learning.

Artificial Neural Networks in Pattern Recognition - Frank-Peter Schilling 2020-09-01

This book constitutes the refereed proceedings of the 9th IAPR TC3 International Workshop on Artificial Neural Networks in Pattern

Recognition, ANNPR 2020, held in Winterthur, Switzerland, in September 2020. The conference was held virtually due to the COVID-19 pandemic. The 22 revised full papers presented were carefully reviewed and selected from 34

submissions. The papers present and discuss the latest research in all areas of neural network- and machine learning-based pattern recognition. They are organized in two sections: learning algorithms and architectures, and applications.