





the subject, including the best practices, using real-world use cases. You will learn to recognize and extract information to increase predictive accuracy and optimize results. Starting with a quick recap of important machine learning concepts, the book will delve straight into deep learning principles using Scikit learn. Moving ahead, you will learn to use the latest open source libraries such as Theano, Keras, Google's TensorFlow, and H2O. Use this guide to uncover the difficulties of pattern recognition, scaling data with greater accuracy and discussing deep learning algorithms and techniques. Whether you want to dive deeper into Deep Learning, or want to investigate how to get more out of this powerful technology, you'll find everything inside. Style and approach Python Machine Learning by example follows practical hands on approach. It walks you through the key elements of Python and its powerful machine learning libraries with the help of real world projects.

**Artificial intelligence and its various components are rapidly engulfing almost every professional industry. Specific features of AI that have proven to be vital solutions to numerous real-world issues are machine learning and deep learning. These intelligent agents unlock higher levels of performance and efficiency, creating a wide span of industrial applications. However, there is a lack of research on the specific uses of machine/deep learning in the professional realm. Machine Learning and Deep Learning in Real-Time Applications provides emerging research exploring the theoretical and practical aspects of machine learning and deep learning and their implementations as well as their ability to solve real-world problems within several professional disciplines including healthcare, business, and computer science. Featuring coverage on a broad range of topics such as image processing, medical improvements, and smart grids, this book is ideally designed for researchers, academicians, scientists, industry experts, scholars, IT professionals, engineers, and students seeking current research on the multifaceted uses and implementations of machine learning and deep learning across the globe.**

**This Book Includes: Learn Python Programming for Beginners, Python Crash Course and Python for Data Analysis. Create Your Business Projects Immediately Thanks to This Step by Step Guide**

**This Book Includes 2 Manuscripts: Deep Learning for Beginners and Data Science from Scratch**

**Deep Learning with PyTorch**

**Fundamentals of Deep Learning**

**Neural Networks and Deep Learning**

**Machine Learning for Beginners**

An introduction to a broad range of topics in deep learning, covering mathematical and conceptual background, deep learning techniques used in industry, and research perspectives. "Written by three experts in the field, Deep Learning is the only comprehensive book on the subject." —Elon Musk, cochair of OpenAI, cofounder and CEO of Tesla and SpaceX Deep learning is a form of machine learning that enables computers to learn from experience and understand the world in terms of a hierarchy of concepts. Because the computer gathers knowledge from experience, there is no need for a human computer operator to formally specify all the knowledge that the computer needs. The hierarchy of concepts allows the computer to learn complicated concepts by building them out of simpler ones; a graph of these hierarchies would be many layers deep. This book introduces a broad range of topics in deep learning. The text offers mathematical and conceptual background, covering relevant concepts in linear algebra, probability theory and information theory, numerical computation, and machine learning. It describes deep learning techniques used by practitioners in industry, including deep feedforward networks, regularization, optimization algorithms, convolutional networks, sequence modeling, and practical methodology; and it surveys such applications as natural language processing, speech recognition, computer vision, online recommendation systems, bioinformatics, and videogames. Finally, the book offers research perspectives, covering such theoretical topics as linear factor models, autoencoders, representation learning, structured probabilistic models, Monte Carlo methods, the partition function, approximate inference, and deep generative models. Deep Learning can be used by undergraduate or graduate students planning careers in either industry or research, and by software engineers who want to begin using deep learning in their products or platforms. A website offers supplementary material for both readers and instructors.

Big Data:The world of business is changing at an ever accelerating rate. Businesses that choose not to adopt the latest technologies are destined to suffer the consequences of obsolescence. The best way for a small to medium sized business to improve profits and secure its future is through adopting data analytics and using big data to improve automation and solve optimization problems. Hidden within the data that we already collect for our businesses lies solutions to all types of questions. From understanding the best hours for your business to keep, to managing payroll, big data and data analytics can vastly improve the efficiency of any business. This is a concept has been well known to the world's largest businesses, but for years has been gated behind the cost of expensive software solutions. Today there are more software solutions for small and medium size businesses than ever before. Whether you want to solve for optimization problems to better understand your business and customer base, or if you merely want to automate ordering items and paying your employees, big data and data analytics is the solution that you need. Continue reading and soon you will have the knowledge to secure your business for long into the future. Neural Networks:Your body is made up of a neural networks that helps you to think, do tasks and even breathe. The neural networks that are in a body are very important. But, what if your body isn't the only place that neural networks can be found?Artificial neural networks are present in systems of computers that all work together to be able to accomplish various goals. They are useful in mathematics, production and many other instances. The artificial neural networks are abuilding block toward making things more lifelike when it comes to computers.Read on to learn more about how artificial and biological neural networks are similar, what types of neural networks are available for systems of computers and how your computer may one day be able to become self-aware.

Do want to learn Python Machine Learning and start implementing models?Are you looking to learn Data Science and how to leverage Python for it? In this book you can learn all about Python machine learning, data science, data analysis, and programming. Once you get the hang of the basics, this crash course will help you use all this knowledge for practical tasks and start programming in seven days! This is a complete Python guide with 3 Manuscripts in 1 book: 1.Learn Python Programming 2.Python Crash Course 3.Python for Data Analysis A great opportunity for your simplicity, wide selection of topics to learn, practical exercises and quick and selected examples. In Manuscript 1 "Learn Python Programming" you'll learn: Understanding Python Why the name "Python"? Python Glossary Python Installation Python Data Types And much more... In Manuscript 2 "Python Crash Course" you'll learn: Evolution of Python Introduction to Python Variables and constants in Python How to install Python Designing and using Functions A modular approach to program organization Using methods Reading and writing files in Python And much more... In Manuscript 3 "Python for Data Analysis" you'll learn: What is deep learning How to conduct a data analysis The different Python libraries that you are able to use for deep learning. Understanding some of the math behind neural networks. The basics of working with the TensorFlow library that can help you with your deep learning project. How to handle the Keras library for your needs. The PyTorch library and how this library is going to be able to help us out with machine learning and deep learning. Looking more at machine learning and how we are able to fit this into some of the data analysis that we are talking about. How deep learning is going to be helpful when it is time to handle your own predictive analysis. And much more... This book is for people who dream of becoming expert programmers without spending months learning the basics. If you set aside some time every day to read this book and practice, then you'll be able to start developing your programs and apps in no time. Ready to get started? Scroll up, click on "Buy Now Button", and Get Your Copy Now!

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Neural Networks and Deep Learning, Deep Learning, Big Data

Introduction to Deep Learning

Mathematics for Machine Learning

Deep Learning and the Game of Go

4 Manuscripts - Data Analytics for Beginners, Deep Learning With Keras, Analyzing Data With Power Bi, Convolutional Neural Networks in Python

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 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 TennoFlow image recognition And of course much more! Get this book bundle NOW and SAVE money!!

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Summary Deep Learning and the Game of Go teaches you how to apply the power of deep learning to complex reasoning tasks by building a Go-playing AI. After exposing you to the foundations of machine and deep learning, you'll use Python to build a bot and then teach it the rules of the game. Foreword by Thore Graepel, DeepMind Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The ancient strategy game of Go is an incredible case study for AI. In 2016, a deep learning-based system shocked the Go world by defeating a world champion. Shortly after that, the upgraded AlphaGo Zero crushed the original bot by using deep reinforcement learning to master the game. Now, you can learn those same deep learning techniques by building your own Go bot! About the Book Deep Learning and the Game of Go introduces deep learning by teaching you to build a Go-winning bot. As you progress, you'll apply increasingly complex training techniques and strategies using the Python deep learning library Keras. You'll enjoy watching your bot master the game of Go, and along the way, you'll discover how to apply your new deep learning skills to a wide range of other scenarios! What's Inside Build and teach a self-improving game AI Enhance classical game AI systems with deep learning Implement neural networks for deep learning about the Reader All you need are basic Python skills and high school-level math. No deep learning experience required. About the Author Max Pumperla and Kevin Ferguson are experienced deep learning specialists skilled in distributed systems and data science. Together, Max and Kevin built the open source bot BetaGo. Table of Contents PART 1 – FOUNDATIONS Toward deep learning: a machine-learning introduction Go as a machine-learning problem Implementing your first Go bot PART 2 – MACHINE LEARNING AND GAME AI Playing games with tree search Getting started with neural networks Designing a neural network for Go data learning from data: a deep-learning bot Deploying bots in the wild Learning by practice: reinforcement learning Reinforcement learning with policy gradients Reinforcement learning with value methods

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The fundamental mathematical tools needed to understand machine learning include linear algebra, analytic geometry, matrix decompositions, vector calculus, optimization, probability and statistics. These topics are traditionally taught in disparate courses, making it hard for data science or computer science students, or professionals, to efficiently learn the mathematics. This self-contained textbook bridges the gap between mathematical and machine learning texts, introducing the mathematical concepts with a minimum of prerequisites. It uses these concepts to derive four central machine learning methods: linear regression, principal component analysis, Gaussian mixture models and support vector machines. For students and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter includes worked examples and exercises to test understanding. Programming tutorials are offered on the book's web site.

Machine Learning

Grokking Deep Learning

Machine Learning in Action

A Comprehensive Guide to AI, Machine Learning, Internet of Things, Robotics, Deep Learning, Predictive Analytics, Neural Networks, Reinforcement Learning, and Our Future

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 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! Download this BOOK BUNDLE now and SAVE MONEY!!

Summary Deep Learning and the Game of Go teaches you how to apply the power of deep learning to complex reasoning tasks by building a Go-playing AI. After exposing you to the foundations of machine and deep learning, you'll use Python to build a bot and then teach it the rules of the game. Foreword by Thore Graepel, DeepMind Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The ancient strategy game of Go is an incredible case study for AI. In 2016, a deep learning-based system shocked the Go world by defeating a world champion. Shortly after that, the upgraded AlphaGo Zero crushed the original bot by using deep reinforcement learning to master the game. Now, you can learn those same deep learning techniques by building your own Go bot! About the Book Deep Learning and the Game of Go introduces deep learning by teaching you to build a Go-winning bot. As you progress, you'll apply increasingly complex training techniques and strategies using the Python deep learning library Keras. You'll enjoy watching your bot master the game of Go, and along the way, you'll discover how to apply your new deep learning skills to a wide range of other scenarios! What's Inside Build and teach a self-improving game AI Enhance classical game AI systems with deep learning Implement neural networks for deep learning about the Reader All you need are basic Python skills and high school-level math. No deep learning experience required. About the Author Max Pumperla and Kevin Ferguson are experienced deep learning specialists skilled in distributed systems and data science. Together, Max and Kevin built the open source bot BetaGo. Table of Contents PART 1 – FOUNDATIONS Toward deep learning: a machine-learning introduction Go as a machine-learning problem Implementing your first Go bot PART 2 – MACHINE LEARNING AND GAME AI Playing games with tree search Getting started with neural networks Designing a neural network for Go data learning from data: a deep-learning bot Deploying bots in the wild Learning by practice: reinforcement learning Reinforcement learning with policy gradients Reinforcement learning with value methods

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