

Machine Learning Con Python Costruire Algoritmi Per Generare Conoscenza 1

Filled with practical, step-by-step instructions and clear explanations for the most important and useful tasks. Heat Maps in R: How-to is an easy to understand book that starts with a simple heat map and takes you all the way through to advanced heat maps with graphics and data manipulation. Heat Maps in R: How-to is the book for you if you want to make use of this free and open source software to get the most out of your data analysis. You need to have at least some experience in using R and know how to run basic scripts from the command line. However, knowledge of other statistical scripting languages such as Octave, S-Plus, or MATLAB will suffice to follow along with the recipes. You need not be from a statistics background.

A hands-on, application-based introduction to machine learning and artificial intelligence (AI) that guides young readers through creating compelling AI-powered games and applications using the Scratch programming language. Machine learning (also known as ML) is one of the building blocks of AI, or artificial intelligence. AI is based on the idea that computers can learn on their own, with your help. Machine Learning for Kids will introduce you to machine learning, painlessly. With this book and its free, Scratch-based, award-winning companion website, you'll see how easy it is to add machine learning to your own projects. You don't even need to know how to code! As you work through the book you'll discover how machine learning systems can be taught to recognize text, images, numbers, and sounds, and how to train your models to improve their accuracy. You'll turn your models into fun computer games and apps, and see what happens when they get confused by bad data. You'll build 13 projects step-by-step from the ground up, including:

- Rock, Paper, Scissors game that recognizes your hand shapes
- An app that recommends movies based on other movies that you like
- A computer character that reacts to insults and compliments
- An interactive virtual assistant (like Siri or Alexa) that obeys commands
- An AI version of Pac-Man, with a smart character that knows how to avoid ghosts

NOTE: This book includes a Scratch tutorial for beginners, and step-by-step instructions for every project. Ages 12+

Discover how data science can help you gain in-depth insight into your business - the easy way! Jobs in data science abound, but few people have the data science skills needed to fill these increasingly important roles. Data Science For Dummies is the perfect starting point for IT professionals and students who want a quick primer on all areas of the expansive data science space. With a focus on business cases, the book explores topics in big data, data science, and data engineering, and how these three areas are combined to produce tremendous value. If you want to pick-up the skills you need to begin a new career or initiate a new project, reading this book will help you understand what technologies, programming languages, and mathematical methods on which to focus. While this book serves as a wildly fantastic guide

through the broad, sometimes intimidating field of big data and data science, it is not an instruction manual for hands-on implementation. Here's what to expect: Provides a background in big data and data engineering before moving on to data science and how it's applied to generate value Includes coverage of big data frameworks like Hadoop, MapReduce, Spark, MPP platforms, and NoSQL Explains machine learning and many of its algorithms as well as artificial intelligence and the evolution of the Internet of Things Details data visualization techniques that can be used to showcase, summarize, and communicate the data insights you generate It's a big, big data world out there—let Data Science For Dummies help you harness its power and gain a competitive edge for your organization.

Companies are spending billions on machine learning projects, but it's money wasted if the models can't be deployed effectively. In this practical guide, Hannes Hapke and Catherine Nelson walk you through the steps of automating a machine learning pipeline using the TensorFlow ecosystem. You'll learn the techniques and tools that will cut deployment time from days to minutes, so that you can focus on developing new models rather than maintaining legacy systems. Data scientists, machine learning engineers, and DevOps engineers will discover how to go beyond model development to successfully productize their data science projects, while managers will better understand the role they play in helping to accelerate these projects. Understand the steps to build a machine learning pipeline Build your pipeline using components from TensorFlow Extended Orchestrate your machine learning pipeline with Apache Beam, Apache Airflow, and Kubeflow Pipelines Work with data using TensorFlow Data Validation and TensorFlow Transform Analyze a model in detail using TensorFlow Model Analysis Examine fairness and bias in your model performance Deploy models with TensorFlow Serving or TensorFlow Lite for mobile devices Learn privacy-preserving machine learning techniques Learn to harness the power of AI for natural language processing, performing tasks such as spell check, text summarization, document classification, and natural language generation. Along the way, you will learn the skills to implement these methods in larger infrastructures to replace existing code or create new algorithms. Applied Natural Language Processing with Python starts with reviewing the necessary machine learning concepts before moving onto discussing various NLP problems. After reading this book, you will have the skills to apply these concepts in your own professional environment. You will: Utilize various machine learning and natural language processing libraries such as TensorFlow, Keras, NLTK, and Gensim Manipulate and preprocess raw text data in formats such as .txt and .pdf Strengthen your skills in data science by learning both the theory and the application of various algorithms.

Questo libro si rivolge a chi accetta la sfida tecnologica dell'intelligenza artificiale e vuole partecipare attivamente a questo cambiamento. Una rivoluzione in atto davanti ai nostri occhi, dopo quella agricola, quella industriale e l'avvento di internet, e che parimenti è destinata a cambiare il mondo dei Sapiens. Quella dell'IA è contemporaneamente

un'opportunità e una potenziale minaccia: un'opportunità per chi saprà cogliere i vantaggi di questa tecnologia sfruttandone le potenzialità; una minaccia per chi non sarà in grado di adeguarsi alla nuova realtà e subirà la trasformazione tecnologica senza confrontarsi con essa. L'opera fornisce un percorso chiaro ed efficace che comprende tutte le conoscenze necessarie per lo sviluppo di sistemi gestiti dall'IA. Attraverso esempi pratici vengono introdotti gli algoritmi ad apprendimento supervisionato per problemi di regressione e di classificazione più utilizzati, quelli ad apprendimento non supervisionato e le strategie per l'apprendimento semi-supervisionato. Le tecniche presentate, inoltre, sono introdotte evidenziando le possibili insidie nelle applicazioni pratiche.

Una storia ad alta tecnologia tra la via Emilia e il web. Un'iniziazione fatta di codici, reti, algoritmi e notti in bianco. La passione e il rigore di uno sviluppatore a caccia di soluzioni. Un'impresa da manuale sul futuro che ci attende. Un'utile e originale guida alla magia e ai segreti dell'intelligenza artificiale. Alessandro Cucci, 32 anni, lavora come Python Expertise Manager presso Energee3 srl, azienda attiva nell'information and communications technology (ICT) con sedi a Reggio Emilia, Milano, Torino, Firenze e Roma. Nel 2016 ha fondato il PyRE (Python User Group Reggio Emilia), community locale di sviluppatori Python. Nel tempo libero, quando non è impegnato a partecipare a conferenze informatiche o a organizzare meeting di sviluppatori, si diverte a collaborare con i Core Developer della Python Software Foundation in qualità di contributor, rilasciando frammenti di codice oggi inclusi nelle ultime versioni del linguaggio Python.

Written as a tutorial to explore and understand the power of R for machine learning. This practical guide that covers all of the need to know topics in a very systematic way. For each machine learning approach, each step in the process is detailed, from preparing the data for analysis to evaluating the results. These steps will build the knowledge you need to apply them to your own data science tasks. Intended for those who want to learn how to use R's machine learning capabilities and gain insight from your data. Perhaps you already know a bit about machine learning, but have never used R; or perhaps you know a little R but are new to machine learning. In either case, this book will get you up and running quickly. It would be helpful to have a bit of familiarity with basic programming concepts, but no prior experience is required.

Delve into neural networks, implement deep learning algorithms, and explore layers of data abstraction with the help of this comprehensive TensorFlow guide About This Book Learn how to implement advanced techniques in deep learning with Google's brainchild, TensorFlow Explore deep neural networks and layers of data abstraction with the help of this comprehensive guide Real-world contextualization through some deep learning problems concerning research and application Who This Book Is For The book is intended for a general audience of people interested in machine learning

and machine intelligence. A rudimentary level of programming in one language is assumed, as is a basic familiarity with computer science techniques and technologies, including a basic awareness of computer hardware and algorithms. Some competence in mathematics is needed to the level of elementary linear algebra and calculus. What You Will Learn Learn about machine learning landscapes along with the historical development and progress of deep learning Learn about deep machine intelligence and GPU computing with the latest TensorFlow 1.x Access public datasets and utilize them using TensorFlow to load, process, and transform data Use TensorFlow on real-world datasets, including images, text, and more Learn how to evaluate the performance of your deep learning models Using deep learning for scalable object detection and mobile computing Train machines quickly to learn from data by exploring reinforcement learning techniques Explore active areas of deep learning research and applications In Detail Deep learning is the step that comes after machine learning, and has more advanced implementations. Machine learning is not just for academics anymore, but is becoming a mainstream practice through wide adoption, and deep learning has taken the front seat. As a data scientist, if you want to explore data abstraction layers, this book will be your guide. This book shows how this can be exploited in the real world with complex raw data using TensorFlow 1.x. Throughout the book, you'll learn how to implement deep learning algorithms for machine learning systems and integrate them into your product offerings, including search, image recognition, and language processing. Additionally, you'll learn how to analyze and improve the performance of deep learning models. This can be done by comparing algorithms against benchmarks, along with machine intelligence, to learn from the information and determine ideal behaviors within a specific context. After finishing the book, you will be familiar with machine learning techniques, in particular the use of TensorFlow for deep learning, and will be ready to apply your knowledge to research or commercial projects. Style and approach This step-by-step guide will explore common, and not so common, deep neural networks and show how these can be exploited in the real world with complex raw data. With the help of practical examples, you will learn how to implement different types of neural nets to build smart applications related to text, speech, and image data processing.

Python for Software Design is a concise introduction to software design using the Python programming language. The focus is on the programming process, with special emphasis on debugging. The book includes a wide range of exercises, from short examples to substantial projects, so that students have ample opportunity to practice each new concept. Chronicles the life of the computer programmer, known for the launch of the operating system GNU Project, from his childhood as a gifted student to his crusade for free software.

Solve challenging data science problems by mastering cutting-edge machine learning techniques in Python About This Book Resolve complex machine learning problems and explore deep learning Learn to use Python code for implementing

a range of machine learning algorithms and techniques A practical tutorial that tackles real-world computing problems through a rigorous and effective approach Who This Book Is For This title is for Python developers and analysts or data scientists who are looking to add to their existing skills by accessing some of the most powerful recent trends in data science. If you've ever considered building your own image or text-tagging solution, or of entering a Kaggle contest for instance, this book is for you! Prior experience of Python and grounding in some of the core concepts of machine learning would be helpful. What You Will Learn Compete with top data scientists by gaining a practical and theoretical understanding of cutting-edge deep learning algorithms Apply your new found skills to solve real problems, through clearly-explained code for every technique and test Automate large sets of complex data and overcome time-consuming practical challenges Improve the accuracy of models and your existing input data using powerful feature engineering techniques Use multiple learning techniques together to improve the consistency of results Understand the hidden structure of datasets using a range of unsupervised techniques Gain insight into how the experts solve challenging data problems with an effective, iterative, and validation-focused approach Improve the effectiveness of your deep learning models further by using powerful ensembling techniques to strap multiple models together In Detail Designed to take you on a guided tour of the most relevant and powerful machine learning techniques in use today by top data scientists, this book is just what you need to push your Python algorithms to maximum potential. Clear examples and detailed code samples demonstrate deep learning techniques, semi-supervised learning, and more - all whilst working with real-world applications that include image, music, text, and financial data. The machine learning techniques covered in this book are at the forefront of commercial practice. They are applicable now for the first time in contexts such as image recognition, NLP and web search, computational creativity, and commercial/financial data modeling. Deep Learning algorithms and ensembles of models are in use by data scientists at top tech and digital companies, but the skills needed to apply them successfully, while in high demand, are still scarce. This book is designed to take the reader on a guided tour of the most relevant and powerful machine learning techniques. Clear descriptions of how techniques work and detailed code examples demonstrate deep learning techniques, semi-supervised learning and more, in real world applications. We will also learn about NumPy and Theano. By this end of this book, you will learn a set of advanced Machine Learning techniques and acquire a broad set of powerful skills in the area of feature selection & feature engineering. Style and approach This book focuses on clarifying the theory and code behind complex algorithms to make them practical, useable, and well-understood. Each topic is described with real-world applications, providing both broad contextual coverage and detailed guidance.

This first collection of selected articles from researchers in automatic analysis, storage, and use of terminology, and

specialists in applied linguistics, computational linguistics, information retrieval, and artificial intelligence offers new insights on computational terminology. The recent needs for intelligent information access, automatic query translation, cross-lingual information retrieval, knowledge management, and document handling have led practitioners and engineers to focus on automated term handling. This book offers new perspectives on their expectations. It will be of interest to terminologists, translators, language or knowledge engineers, librarians and all others dependent on the automation of terminology processing in professional practices. The articles cover themes such as automatic thesaurus construction, automatic term acquisition, automatic term translation, automatic indexing and abstracting, and computer-aided knowledge acquisition. The high academic standing of the contributors together with their experience in terminology management results in a set of contributions that tackle original and unique scientific issues in correlation with genuine applications of terminology processing.

You've decided to tackle machine learning - because you're job hunting, embarking on a new project, or just think self-driving cars are cool. But where to start? It's easy to be intimidated, even as a software developer. The good news is that it doesn't have to be that hard. Master machine learning by writing code one line at a time, from simple learning programs all the way to a true deep learning system. Tackle the hard topics by breaking them down so they're easier to understand, and build your confidence by getting your hands dirty. Peel away the obscurities of machine learning, starting from scratch and going all the way to deep learning. Machine learning can be intimidating, with its reliance on math and algorithms that most programmers don't encounter in their regular work. Take a hands-on approach, writing the Python code yourself, without any libraries to obscure what's really going on. Iterate on your design, and add layers of complexity as you go. Build an image recognition application from scratch with supervised learning. Predict the future with linear regression. Dive into gradient descent, a fundamental algorithm that drives most of machine learning. Create perceptrons to classify data. Build neural networks to tackle more complex and sophisticated data sets. Train and refine those networks with backpropagation and batching. Layer the neural networks, eliminate overfitting, and add convolution to transform your neural network into a true deep learning system. Start from the beginning and code your way to machine learning mastery. What You Need: The examples in this book are written in Python, but don't worry if you don't know this language: you'll pick up all the Python you need very quickly. Apart from that, you'll only need your computer, and your code-adept brain.

One of Mark Cuban's top reads for better understanding A.I. (inc.com, 2021) Your comprehensive entry-level guide to machine learning While machine learning expertise doesn't quite mean you can create your own Turing Test-proof android—as in the movie *Ex Machina*—it is a form of artificial intelligence and one of the most exciting technological means

of identifying opportunities and solving problems fast and on a large scale. Anyone who masters the principles of machine learning is mastering a big part of our tech future and opening up incredible new directions in careers that include fraud detection, optimizing search results, serving real-time ads, credit-scoring, building accurate and sophisticated pricing models—and way, way more. Unlike most machine learning books, the fully updated 2nd Edition of *Machine Learning For Dummies* doesn't assume you have years of experience using programming languages such as Python (R source is also included in a downloadable form with comments and explanations), but lets you in on the ground floor, covering the entry-level materials that will get you up and running building models you need to perform practical tasks. It takes a look at the underlying—and fascinating—math principles that power machine learning but also shows that you don't need to be a math whiz to build fun new tools and apply them to your work and study. Understand the history of AI and machine learning Work with Python 3.8 and TensorFlow 2.x (and R as a download) Build and test your own models Use the latest datasets, rather than the worn out data found in other books Apply machine learning to real problems Whether you want to learn for college or to enhance your business or career performance, this friendly beginner's guide is your best introduction to machine learning, allowing you to become quickly confident using this amazing and fast-developing technology that's impacting lives for the better all over the world.

Build machine and deep learning systems with the newly released TensorFlow 2 and Keras for the lab, production, and mobile devices Key Features Introduces and then uses TensorFlow 2 and Keras right from the start Teaches key machine and deep learning techniques Understand the fundamentals of deep learning and machine learning through clear explanations and extensive code samples Book Description Deep Learning with TensorFlow 2 and Keras, Second Edition teaches neural networks and deep learning techniques alongside TensorFlow (TF) and Keras. You'll learn how to write deep learning applications in the most powerful, popular, and scalable machine learning stack available.

TensorFlow is the machine learning library of choice for professional applications, while Keras offers a simple and powerful Python API for accessing TensorFlow. TensorFlow 2 provides full Keras integration, making advanced machine learning easier and more convenient than ever before. This book also introduces neural networks with TensorFlow, runs through the main applications (regression, ConvNets (CNNs), GANs, RNNs, NLP), covers two working example apps, and then dives into TF in production, TF mobile, and using TensorFlow with AutoML. What you will learn Build machine learning and deep learning systems with TensorFlow 2 and the Keras API Use Regression analysis, the most popular approach to machine learning Understand ConvNets (convolutional neural networks) and how they are essential for deep learning systems such as image classifiers Use GANs (generative adversarial networks) to create new data that fits with existing patterns Discover RNNs (recurrent neural networks) that can process sequences of input intelligently, using one

part of a sequence to correctly interpret another Apply deep learning to natural human language and interpret natural language texts to produce an appropriate response Train your models on the cloud and put TF to work in real environments Explore how Google tools can automate simple ML workflows without the need for complex modeling Who this book is for This book is for Python developers and data scientists who want to build machine learning and deep learning systems with TensorFlow. Whether or not you have done machine learning before, this book gives you the theory and practice required to use Keras, TensorFlow 2, and AutoML to build machine learning systems.

Il machine learning facile! Il machine learning, per quanto possa sembrare un argomento complesso, è un nuovo modo per insegnare al computer a svolgere tutta una serie di compiti utili e importanti. Il rilevamento di frodi, gli annunci in tempo reale su pagine web, l'automazione e il filtraggio dello spam via e-mail e l'utilizzo delle reti neurali per l'elaborazione di immagini, suoni e testi sono solo alcuni esempi. Questa guida aggiornata a Python 3 spiega come iniziare, quali sono e come funzionano gli algoritmi di machine learning, come si utilizzano linguaggi di programmazione quali Python e R, come svolgere compiti pratici utilizzando gli algoritmi più efficaci e molto altro ancora!

Oggi più che mai elaborare il magma di dati disponibili è una sfida affascinante e imprescindibile. Il machine learning, ovvero la capacità di creare macchine in grado di apprendere in modo automatico, permette di affrontarla. Questa nuova edizione del bestseller di Sebastian Raschka, profondamente aggiornata e ampliata, accompagna nel mondo del machine learning e mostra come Python sia il linguaggio di programmazione ideale per interrogare i dati e recuperare preziosi insight. Viene spiegato l'utilizzo di librerie dedicate - tra cui TensorFlow e scikit-learn - applicate in ambiti come la selezione e la compressione dei dati, l'analisi del linguaggio naturale, l'elaborazione di previsioni, il riconoscimento delle immagini, e viene dato spazio a due tecniche di machine learning all'avanguardia: il reinforcement learning e le reti generative avversarie (GAN). L'approccio è pragmatico: tutti i concetti sono accompagnati da esempi di codice e tutorial passo-passo. La lettura è consigliata a chi ha già alle spalle qualche studio teorico nel campo della scienza dei dati e ha maturato un'esperienza di base nella programmazione in Python.

Learn the language of la dolce vita! For anyone who wants to learn and enjoy the most expressive and romantic of languages, the third edition of 'The Complete Idiot's Guide to Learning Italian' is the first choice for a whole new generation of enthusiastic students of Italian. This updated edition includes two new quick references on verbs, grammar, and sentence structure; two new appendixes on Italian synonyms and popular idiomatic phrases; and updated business and money sections. First two editions have sold extraordinarily well. Italian is the fourth most popular language in the United States.

The theme of the conference this year was Critical CALL, drawing inspiration from the work carried out in the broader field of Critical Applied Linguistics. The term 'critical' has many possible interpretations, and as Pennycook (2001) outlines, has many concerns. It was from these that we decided on the conference theme, in particular the notion that we should question the assumptions that lie at the basis of our praxis, ideas that have become 'naturalized' and are not called into question. Over 200

presentations were delivered in 68 different sessions, both in English and Italian, on topics related specifically to the theme and also more general CALL topics. 94 of these were submitted as extended papers and appear in this volume of proceedings.

Summary Building Ethereum Dapps introduces you to decentralized applications based on the Ethereum blockchain platform. In this book, you'll learn the principles of Dapps development by rolling up your sleeves and actually building a few! Foreword by Thomas Bertani. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology Imagine unbreakably secure applications that handle personal and business transactions without any central agency controlling the process. Decentralized applications, or Dapps, do just this, shifting power to users. The Ethereum blockchain platform provides the tools you need to build Dapps, including an innovative "smart contracts" model and Solidity, a Dapp-aware JavaScript-like programming language.

About the Book Building Ethereum Dapps teaches Dapps development on the Ethereum blockchain platform. You'll begin with a mental model of how Dapps operate, and then dive into designing and implementing smart contracts in Ethereum's Solidity language. You'll explore Ethereum smart contract development tools, like Truffle and Web3, and pick up best practices for design and security. Practical exercises throughout give you valuable hands-on experience.

What's inside Ethereum's key components Implementing smart contracts in Solidity Communicating with a smart contract in Web3 Developing Dapps with Truffle Best practices for design and security improvement About the Reader For developers with intermediate experience in JavaScript or an OO language. Familiarity with blockchain concepts is helpful.

About the Author Roberto Infante is a software development consultant who specializes in finance. He currently works on financial risk management systems and on blockchain technology.

Table of Contents PART 1 A first look at decentralized applications Understanding the blockchain The Ethereum platform Deploying your first smart contract PART 2 Programming smart contracts in Solidity Writing more complex smart contracts Generalizing functionality with abstract contracts and interfaces Managing smart contracts with Web3.js PART 3 The Ethereum ecosystem Unit testing contracts with Mocha Improving the development cycle with Truffle Putting it all together: Building a complete voting Dapp PART 4 Making a Dapp production ready Security considerations Conclusions

L'analisi di quello che avviene nei social media - e in Rete - è una componente chiave del marketing in generale e del web marketing in particolare, tanto importante quanto l'abilità di costruire campagne di comunicazione e advertising efficaci, anzi necessaria per ottimizzare qualsiasi investimento online. Questo manuale affronta tutte le fasi che portano a pianificare in maniera professionale e accurata una strategia di monitoraggio e analisi in grado di esaminare sia i dati presenti nei presidi proprietari di un brand, sia la percezione e il sentiment delle conversazioni che si sviluppano negli altri canali. Vengono illustrati strumenti e metriche che si adattano e mettono in relazione media diversi, soffermandosi anche sul delicato tema del monitoraggio durante una crisi di comunicazione. Il fine ultimo è dare vita ad attività di intelligence che trasformino i dati del Web in informazioni e insight utili al business.

Essential skills for first-time programmers! This easy-to-use book explains the fundamentals of UML. You'll learn to read, draw,

and use this visual modeling language to create clear and effective blueprints for software development projects. The modular approach of this series--including drills, sample projects, and mastery checks--makes it easy to learn to use this powerful programming language at your own pace.

Implement natural language processing applications with Python using a problem-solution approach. This book has numerous coding exercises that will help you to quickly deploy natural language processing techniques, such as text classification, parts of speech identification, topic modeling, text summarization, text generation, entity extraction, and sentiment analysis. Natural Language Processing Recipes starts by offering solutions for cleaning and preprocessing text data and ways to analyze it with advanced algorithms. You'll see practical applications of the semantic as well as syntactic analysis of text, as well as complex natural language processing approaches that involve text normalization, advanced preprocessing, POS tagging, and sentiment analysis. You will also learn various applications of machine learning and deep learning in natural language processing. By using the recipes in this book, you will have a toolbox of solutions to apply to your own projects in the real world, making your development time quicker and more efficient. What You Will Learn Apply NLP techniques using Python libraries such as NLTK, TextBlob, spaCy, Stanford CoreNLP, and many more Implement the concepts of information retrieval, text summarization, sentiment analysis, and other advanced natural language processing techniques. Identify machine learning and deep learning techniques for natural language processing and natural language generation problems Who This Book Is For Data scientists who want to refresh and learn various concepts of natural language processing through coding exercises.

API development is becoming increasingly common for server-side developers thanks to the rise of front-end JavaScript frameworks, iPhone applications, and API-centric architectures. It might seem like grabbing stuff from a data source and shoving it out as JSON would be easy, but surviving changes in business logic, database schema updates, new features, or deprecated endpoints can be a nightmare. After finding many of the existing resources for API development to be lacking, Phil learned a lot of things the hard way through years of trial and error. This book aims to condense that experience, taking examples and explanations further than the trivial apples and pears nonsense tutorials often provide. By passing on some best practices and general good advice you can hit the ground running with API development, combined with some horror stories and how they were overcome/avoided/averted. This book will discuss the theory of designing and building APIs in any language or framework, with this theory applied in PHP-based examples.

Learn the science of collecting information to make effective decisions Everyday decisions are made without the benefit of accurate information. Optimal Learning develops the needed principles for gathering information to make decisions, especially when collecting information is time-consuming and expensive. Designed for readers with an elementary background in probability and statistics, the book presents effective and practical policies illustrated in a wide range of applications, from energy, homeland security, and transportation to engineering, health, and business. This book covers the fundamental dimensions of a learning problem and presents a simple method for testing and comparing policies for learning. Special attention is given to the knowledge gradient policy and its use with a wide range of belief models, including lookup table and parametric and for online and offline problems. Three sections develop ideas with increasing levels of sophistication: Fundamentals explores fundamental topics, including adaptive learning, ranking and selection, the knowledge gradient, and

bandit problems Extensions and Applications features coverage of linear belief models, subset selection models, scalar function optimization, optimal bidding, and stopping problems Advanced Topics explores complex methods including simulation optimization, active learning in mathematical programming, and optimal continuous measurements Each chapter identifies a specific learning problem, presents the related, practical algorithms for implementation, and concludes with numerous exercises. A related website features additional applications and downloadable software, including MATLAB and the Optimal Learning Calculator, a spreadsheet-based package that provides an introduction to learning and a variety of policies for learning.

Solve real-world data problems with R and machine learning Key Features Third edition of the bestselling, widely acclaimed R machine learning book, updated and improved for R 3.6 and beyond Harness the power of R to build flexible, effective, and transparent machine learning models Learn quickly with a clear, hands-on guide by experienced machine learning teacher and practitioner, Brett Lantz Book Description Machine learning, at its core, is concerned with transforming data into actionable knowledge. R offers a powerful set of machine learning methods to quickly and easily gain insight from your data. Machine Learning with R, Third Edition provides a hands-on, readable guide to applying machine learning to real-world problems. Whether you are an experienced R user or new to the language, Brett Lantz teaches you everything you need to uncover key insights, make new predictions, and visualize your findings. This new 3rd edition updates the classic R data science book to R 3.6 with newer and better libraries, advice on ethical and bias issues in machine learning, and an introduction to deep learning. Find powerful new insights in your data; discover machine learning with R. What you will learn Discover the origins of machine learning and how exactly a computer learns by example Prepare your data for machine learning work with the R programming language Classify important outcomes using nearest neighbor and Bayesian methods Predict future events using decision trees, rules, and support vector machines Forecast numeric data and estimate financial values using regression methods Model complex processes with artificial neural networks — the basis of deep learning Avoid bias in machine learning models Evaluate your models and improve their performance Connect R to SQL databases and emerging big data technologies such as Spark, H2O, and TensorFlow Who this book is for Data scientists, students, and other practitioners who want a clear, accessible guide to machine learning with R.

This book gathers the latest advances, innovations, and applications in the field of innovative biosystems engineering for sustainable agriculture, forestry and food production. Focusing on the challenges of implementing sustainability in various contexts in the fields of biosystems engineering, it shows how the research has addressed the sustainable use of renewable and non-renewable resources. It also presents possible solutions to help achieve sustainable production. The Mid-Term Conference of the Italian Association of Agricultural Engineering (AIIA) is part of a series of conferences, seminars and meetings that the AIIA organizes, together with other public and private stakeholders, to promote the creation and dissemination of new knowledge in the sector. The contributions included in the book were selected by means of a rigorous peer-review process, and offer an extensive and multidisciplinary overview of interesting solutions in the field of innovative biosystems engineering for sustainable agriculture.

Although interest in machine learning has reached a high point, lofty expectations often scuttle projects before they get very far. How can machine learning—especially deep neural networks—make a real difference in your organization? This hands-on guide not only provides the most practical information available on the subject, but also helps you get started building efficient deep learning networks. Authors Adam Gibson and Josh Patterson provide theory on deep learning before introducing their open-source Deeplearning4j (DL4J) library for developing production-class workflows. Through real-world examples, you'll learn methods and strategies for training deep network architectures and

running deep learning workflows on Spark and Hadoop with DL4J. Dive into machine learning concepts in general, as well as deep learning in particular Understand how deep networks evolved from neural network fundamentals Explore the major deep network architectures, including Convolutional and Recurrent Learn how to map specific deep networks to the right problem Walk through the fundamentals of tuning general neural networks and specific deep network architectures Use vectorization techniques for different data types with DataVec, DL4J's workflow tool Learn how to use DL4J natively on Spark and Hadoop

Leverage benefits of machine learning techniques using Python About This Book Improve and optimise machine learning systems using effective strategies. Develop a strategy to deal with a large amount of data. Use of Python code for implementing a range of machine learning algorithms and techniques. Who This Book Is For This title is for data scientist and researchers who are already into the field of data science and want to see machine learning in action and explore its real-world application. Prior knowledge of Python programming and mathematics is must with basic knowledge of machine learning concepts. What You Will Learn Learn to write clean and elegant Python code that will optimize the strength of your algorithms Uncover hidden patterns and structures in data with clustering Improve accuracy and consistency of results using powerful feature engineering techniques Gain practical and theoretical understanding of cutting-edge deep learning algorithms Solve unique tasks by building models Get grips on the machine learning design process In Detail Machine learning and predictive analytics are becoming one of the key strategies for unlocking growth in a challenging contemporary marketplace. It is one of the fastest growing trends in modern computing, and everyone wants to get into the field of machine learning. In order to obtain sufficient recognition in this field, one must be able to understand and design a machine learning system that serves the needs of a project. The idea is to prepare a learning path that will help you to tackle the real-world complexities of modern machine learning with innovative and cutting-edge techniques. Also, it will give you a solid foundation in the machine learning design process, and enable you to build customized machine learning models to solve unique problems. The course begins with getting your Python fundamentals nailed down. It focuses on answering the right questions that cove a wide range of powerful Python libraries, including scikit-learn Theano and Keras.After getting familiar with Python core concepts, it's time to dive into the field of data science. You will further gain a solid foundation on the machine learning design and also learn to customize models for solving problems. At a later stage, you will get a grip on more advanced techniques and acquire a broad set of powerful skills in the area of feature selection and feature engineering. Style and approach This course includes all the resources that will help you jump into the data science field with Python. The aim is to walk through the elements of Python covering powerful machine learning libraries. This course will explain important machine learning models in a step-by-step manner. Each topic is well explained with real-world applications with detailed guidance.Through this comprehensive guide, you will be able to explore machine learning techniques.

Take tiny steps to enter the big world of data science through this interesting guide About This Book Learn the fundamentals of machine learning and build your own intelligent applications Master the art of building your own machine learning systems with this example-based practical guide Work with important classification and regression algorithms and other machine learning techniques Who This Book Is For This book is for anyone interested in entering the data science stream with machine learning. Basic familiarity with Python is assumed. What You Will Learn Exploit the power of Python to handle data extraction, manipulation, and exploration techniques Use Python to visualize data spread across multiple dimensions and extract useful features Dive deep into the world of analytics to predict situations correctly Implement machine learning classification and regression algorithms from scratch in Python Be amazed to see the algorithms in action Evaluate the performance of a machine learning model and optimize it Solve interesting real-world problems using machine learning and Python as the

journey unfolds In Detail Data science and machine learning are some of the top buzzwords in the technical world today. A resurging interest in machine learning is due to the same factors that have made data mining and Bayesian analysis more popular than ever. This book is your entry point to machine learning. This book starts with an introduction to machine learning and the Python language and shows you how to complete the setup. Moving ahead, you will learn all the important concepts such as, exploratory data analysis, data preprocessing, feature extraction, data visualization and clustering, classification, regression and model performance evaluation. With the help of various projects included, you will find it intriguing to acquire the mechanics of several important machine learning algorithms – they are no more obscure as they thought. Also, you will be guided step by step to build your own models from scratch. Toward the end, you will gather a broad picture of the machine learning ecosystem and best practices of applying machine learning techniques. Through this book, you will learn to tackle data-driven problems and implement your solutions with the powerful yet simple language, Python. Interesting and easy-to-follow examples, to name some, news topic classification, spam email detection, online ad click-through prediction, stock prices forecast, will keep you glued till you reach your goal. Style and approach This book is an enticing journey that starts from the very basics and gradually picks up pace as the story unfolds. Each concept is first succinctly defined in the larger context of things, followed by a detailed explanation of their application. Every concept is explained with the help of a project that solves a real-world problem, and involves hands-on work—giving you a deep insight into the world of machine learning. With simple yet rich language—Python—you will understand and be able to implement the examples with ease.

Learn the techniques and math you need to start making sense of your data About This Book Enhance your knowledge of coding with data science theory for practical insight into data science and analysis More than just a math class, learn how to perform real-world data science tasks with R and Python Create actionable insights and transform raw data into tangible value Who This Book Is For You should be fairly well acquainted with basic algebra and should feel comfortable reading snippets of R/Python as well as pseudo code. You should have the urge to learn and apply the techniques put forth in this book on either your own data sets or those provided to you. If you have the basic math skills but want to apply them in data science or you have good programming skills but lack math, then this book is for you. What You Will Learn Get to know the five most important steps of data science Use your data intelligently and learn how to handle it with care Bridge the gap between mathematics and programming Learn about probability, calculus, and how to use statistical models to control and clean your data and drive actionable results Build and evaluate baseline machine learning models Explore the most effective metrics to determine the success of your machine learning models Create data visualizations that communicate actionable insights Read and apply machine learning concepts to your problems and make actual predictions In Detail Need to turn your skills at programming into effective data science skills? Principles of Data Science is created to help you join the dots between mathematics, programming, and business analysis. With this book, you'll feel confident about asking—and answering—complex and sophisticated questions of your data to move from abstract and raw statistics to actionable ideas. With a unique approach that bridges the gap between mathematics and computer science, this books takes you through the entire data science pipeline. Beginning with cleaning and preparing data, and effective data mining strategies and techniques, you'll move on to build a comprehensive picture of how every piece of the data science puzzle fits together. Learn the fundamentals of computational mathematics and statistics, as well as some pseudocode being used today by data scientists and analysts. You'll get to grips with machine learning, discover the statistical models that help you take control and navigate even the densest datasets, and find out how to create powerful visualizations that communicate what your data means. Style and approach This is an easy-to-understand and accessible tutorial. It is a step-by-step guide

with use cases, examples, and illustrations to get you well-versed with the concepts of data science. Along with explaining the fundamentals, the book will also introduce you to slightly advanced concepts later on and will help you implement these techniques in the real world.

Machine learning con Python. Costruire algoritmi per generare conoscenza
Machine Learning con Python - Nuova edizione
Costruire algoritmi per generare conoscenza
Apogeo Editore

This book will teach you how to move quickly from business questions to machine learning models in production. Using real-world examples implemented with Python and Jupyter notebooks, you'll learn about many the features and APIs of Amazon SageMaker on a wide spectrum of use cases: tabular data, computer vision, and natural language processing.

Machine learning has become an integral part of many commercial applications and research projects, but this field is not exclusive to large companies with extensive research teams. If you use Python, even as a beginner, this book will teach you practical ways to build your own machine learning solutions. With all the data available today, machine learning applications are limited only by your imagination. You'll learn the steps necessary to create a successful machine-learning application with Python and the scikit-learn library. Authors Andreas Müller and Sarah Guido focus on the practical aspects of using machine learning algorithms, rather than the math behind them. Familiarity with the NumPy and matplotlib libraries will help you get even more from this book. With this book, you'll learn: Fundamental concepts and applications of machine learning Advantages and shortcomings of widely used machine learning algorithms How to represent data processed by machine learning, including which data aspects to focus on Advanced methods for model evaluation and parameter tuning The concept of pipelines for chaining models and encapsulating your workflow Methods for working with text data, including text-specific processing techniques Suggestions for improving your machine learning and data science skills

Make personalized marketing a reality with this practical guide to predictive analytics
Predictive Marketing is a predictive analytics primer for organizations large and small, offering practical tips and actionable strategies for implementing more personalized marketing immediately. The marketing paradigm is changing, and this book provides a blueprint for navigating the transition from creative-to data-driven marketing, from one-size-fits-all to one-on-one, and from marketing campaigns to real-time customer experiences. You'll learn how to use machine-learning technologies to improve customer acquisition and customer growth, and how to identify and re-engage at-risk or lapsed customers by implementing an easy, automated approach to predictive analytics. Much more than just theory and testament to the power of personalized marketing, this book focuses on action, helping you understand and actually begin using this revolutionary approach to the customer experience. Predictive analytics can finally make personalized marketing a reality. For the first time, predictive marketing is accessible to all marketers, not just those at large corporations — in fact, many smaller organizations are leapfrogging their larger counterparts with innovative programs. This book shows you how to bring predictive analytics to your organization, with actionable guidance that get you started today. Implement predictive marketing at any size organization Deliver a more personalized marketing experience Automate predictive analytics with machine learning technology Base marketing decisions on concrete data rather than unproven ideas Marketers have long been talking about delivering personalized experiences across channels. All marketers want to deliver happiness, but most still employ a one-size-fits-all approach. Predictive Marketing provides the information and insight you need to lift your organization out of the campaign rut and into the rarefied atmosphere of a truly personalized customer experience.

MACHINE LEARNING - PYTHON Buy the Paperback version of this book, and get the Kindle eBook version included for FREE! Do You Want to Become An Expert Of Machine Learning?? Start Getting this Book and Follow My Step by Step Explanations! Click Add To Cart

Now! This book is for anyone who would like to learn how to develop machine-learning systems. We will cover the most important concepts about machine learning algorithms, in both a theoretical and a practical way, and we'll implement many machine-learning algorithms using the Scikit-learn library in the Python programming language. In the first chapter, you'll learn the most important concepts of machine learning, and, in the next chapter, you'll work mainly with the classification. In the last chapter you'll learn how to train your model. I assume that you've knowledge of the basics of programming This book contains illustrations and step-by-step explanations with bullet points and exercises for easy and enjoyable learning. Benefits of reading this book that you're not going to find anywhere else: Introduction to Machine Learning Classification How to train a Model Different Models Combinations Don't miss out on this new step by step guide to Machine Learning. All you need to do is scroll up and click on the BUY NOW button to learn all about it!

Gli strumenti di coding per progettare strategie di successo. Python, oggi al massimo della sua popolarità, è un linguaggio alla portata di tutti. Semplice da apprendere, potente e open source, è utilizzato nei più svariati ambiti professionali e industriali, dall'ingegneria alla ricerca medica, fino alla finanza. Questo libro è sia un manuale di programmazione Python, per neofiti e non, sia un manuale di progetto di analisi quantitativa. Il taglio molto pratico ha l'obiettivo di rendere il lettore indipendente nelle proprie analisi, siano esse di breve periodo, in ottica trading, che di medio lungo periodo, con orizzonte investing. Dopo aver appreso le basi del linguaggio e dell'utilizzo delle principali librerie, si passa all'analisi statistica dei dati di prezzo, fino alla ricerca di inefficienze da poter utilizzare con profitto nella realizzazione di trading system intraday e multiday. Il lettore è poi guidato nella realizzazione di un intero motore di backtest e nell'approfondimento delle tecniche di validazione classiche e non convenzionali. Dopo aver messo a confronto diversi sistemi che operino sia su azioni che su commodity, vengono approfonditi i temi dell'ottimizzazione multi-parametrica e della gestione del rischio, mediante un focus particolare sulla Montecarlo Analysis e sull'Equity & Performance Control. In sintesi, un testo che racconta in dettaglio tutte le fasi di progetto, realizzazione e validazione di idee al servizio dell'investitore.

La data science è una materia in rapida evoluzione le cui applicazioni spaziano in ambiti diversi della nostra vita. Questo libro insegna a trasformare database caotici e dati non strutturati in dataset omogenei e ordinati attraverso l'impiego degli strumenti essenziali del linguaggio Python per il data mining, il machine learning, la network analysis e l'elaborazione del linguaggio naturale. Il lettore impara ad acquisire dati numerici e testuali eterogenei da fonti diverse come semplici file locali, database e il Web. Scopre come ripulirli e normalizzarli. Lavora su basi di dati SQL e NoSQL, applica strumenti per la rappresentazione grafica e scopre i modelli di analisi statistiche e predittive più utilizzati nel campo del machine learning. Una lettura dedicata a studenti e docenti, ai professionisti alle prime armi e agli sviluppatori in cerca di una guida di riferimento. I requisiti fondamentali sono una normale esperienza di programmazione in Python e un ambiente di sviluppo con installata la versione 3.3 (o superiore) del linguaggio oltre ai moduli e alle librerie specifiche indicate nel testo.

[Copyright: aeff73882abdc74b23bcf662d773cf97](https://www.amazon.it/dp/B0773CF97)