Data Science Con Python Dalle Stringhe Al Machine Learning Le Tecniche Essenziali Per Lavorare Sui Dati

Using data science in order to solve a problem requires a scientific mindset more than coding skills. Data Science for Supply Chain Forecasting, Second Edition contends that a true scientific method which includes experimentation, observation, and constant questioning must be applied to supply chains to achieve excellence in demand forecasting. This second edition adds more than 45 percent extra content with four new chapters including an introduction to neural networks and the forecast value added framework. Part I focuses on statistical "traditional" models, Part II, on machine learning, and the all-new Part III discusses demand forecasting process management. The various chapters focus on both forecast models and new concepts such as metrics, underfitting, overfitting, outliers, feature optimization, and external demand drivers. The book is replete with do-it-yourself sections with implementations provided in Python (and Excel for the statistical models) to show the readers how to apply these models themselves. This hands-on book, covering the entire range of forecasting—from the basics all the way to leading-edge models—will benefit supply chain practitioners, forecasters, and analysts looking to go the extra mile with demand forecasting.

When you combine the sheer scale and range of digital information now available with a journalist's "nose for news" and her ability to tell a compelling story, a new world of possibility opens up. With The Data Journalism Handbook, you'll explore the potential, limits, and applied uses of this new and fascinating field. This valuable handbook has attracted scores of contributors since the European Journalism Centre and the Open Knowledge Foundation launched the project at MozFest 2011. Through a collection of tips and techniques from leading journalists, professors, software developers, and data analysts, you'll learn how data can be either the source of data journalism or a tool with which the story is told—or both. Examine the use of data journalism at the BBC, the Chicago Tribune, the Guardian, and other news organizations Explore in-depth case studies on elections, riots, school performance, and corruption Learn how to find data from the Web, through freedom of information laws, and by "crowd sourcing" Extract information from raw data with tips for working with numbers and statistics and using data visualization Deliver data through infographics, news apps, open data platforms, and download links

If you need to learn CUDA but don't have experience with parallel computing, CUDA Programming: A Developer's Introduction offers a detailed guide to CUDA with a grounding in parallel fundamentals. It starts by introducing CUDA and bringing you up to speed on GPU parallelism and hardware, then delving into CUDA installation. Chapters on core

concepts including threads, blocks, grids, and memory focus on both parallel and CUDA-specific issues. Later, the book demonstrates CUDA in practice for optimizing applications, adjusting to new hardware, and solving common problems. Comprehensive introduction to parallel programming with CUDA, for readers new to both Detailed instructions help readers optimize the CUDA software development kit Practical techniques illustrate working with memory, threads, algorithms, resources, and more Covers CUDA on multiple hardware platforms: Mac, Linux and Windows with several NVIDIA chipsets Each chapter includes exercises to test reader knowledge

Summary Deep learning has transformed the fields of computer vision, image processing, and natural language applications. Thanks to TensorFlow.js, now JavaScript developers can build deep learning apps without relying on Python or R. Deep Learning with JavaScript shows developers how they can bring DL technology to the web. Written by the main authors of the TensorFlow library, this new book provides fascinating use cases and in-depth instruction for deep learning apps in JavaScript in your browser or on Node. Foreword by Nikhil Thorat and Daniel Smilkov. About the technology Running deep learning applications in the browser or on Node-based backends opens up exciting possibilities for smart web applications. With the TensorFlow.js library, you build and train deep learning models with JavaScript. Offering uncompromising production-quality scalability, modularity, and responsiveness, TensorFlow.js really shines for its portability. Its models run anywhere JavaScript runs, pushing ML farther up the application stack. About the book In Deep Learning with JavaScript, you'll learn to use TensorFlow.js to build deep learning models that run directly in the browser. This fast-paced book, written by Google engineers, is practical, engaging, and easy to follow. Through diverse examples featuring text analysis, speech processing, image recognition, and self-learning game AI, you'll master all the basics of deep learning and explore advanced concepts, like retraining existing models for transfer learning and image generation. What's inside - Image and language processing in the browser - Tuning ML models with client-side data - Text and image creation with generative deep learning - Source code samples to test and modify About the reader For JavaScript programmers interested in deep learning. About the author Shanging Cai, Stanley Bileschi and Eric D. Nielsen are software engineers with experience on the Google Brain team, and were crucial to the development of the high-level API of TensorFlow.js. This book is based in part on the classic, Deep Learning with Python by François Chollet. TOC: PART 1 - MOTIVATION AND BASIC CONCEPTS 1 • Deep learning and JavaScript PART 2 - A GENTLE INTRODUCTION TO TENSORFLOW.JS 2 • Getting started: Simple linear regression in TensorFlow.js 3 • Adding nonlinearity: Beyond weighted sums 4 • Recognizing images and sounds using convnets 5 • Transfer learning: Reusing pretrained neural networks PART 3 - ADVANCED DEEP LEARNING WITH TENSORFLOW.JS 6 • Working with data 7 • Visualizing data and models 8 • Underfitting, overfitting, and the universal workflow of machine learning 9 • Deep

learning for sequences and text 10 • Generative deep learning 11 • Basics of deep reinforcement learning PART 4 - SUMMARY AND CLOSING WORDS 12 • Testing, optimizing, and deploying models 13 • Summary, conclusions, and beyond

With the resurgence of neural networks in the 2010s, deep learning has become essential for machine learning practitioners and even many software engineers. This book provides a comprehensive introduction for data scientists and software engineers with machine learning experience. You'll start with deep learning basics and move quickly to the details of important advanced architectures, implementing everything from scratch along the way. Author Seth Weidman shows you how neural networks work using a first principles approach. You'll learn how to apply multilayer neural networks, convolutional neural networks, and recurrent neural networks from the ground up. With a thorough understanding of how neural networks work mathematically, computationally, and conceptually, you'll be set up for success on all future deep learning projects. This book provides: Extremely clear and thorough mental models—accompanied by working code examples and mathematical explanations—for understanding neural networks Methods for implementing multilayer neural networks from scratch, using an easy-to-understand object-oriented framework Working implementations and clear-cut explanations of convolutional and recurrent neural networks Implementation of these neural network concepts using the popular PyTorch framework

* Totaling 900 pages and covering all of the topics important to new and intermediate users, Beginning Python is intended to be the most comprehensive book on the Python ever written. * The 15 sample projects in Beginning Python are attractive to novice programmers interested in learning by creating applications of timely interest, such as a P2P file-sharing application, Web-based bulletin-board, and an arcade game similar to the classic Space Invaders. * The author Magnus Lie Hetland, PhD, is author of Apress' well-received 2002 title, Practical Python, ISBN: 1-59059-006-6. He's also author of the popular online guide, Instant Python Hacking (http://www.hetland.org), from which both Practical Python and Beginning Python are based.

Construct, analyze, and visualize networks with networkx, a Python language module. Network analysis is a powerful tool you can apply to a multitude of datasets and situations. Discover how to work with all kinds of networks, including social, product, temporal, spatial, and semantic networks. Convert almost any real-world data into a complex network--such as recommendations on co-using cosmetic products, muddy hedge fund connections, and online friendships. Analyze and visualize the network, and make business decisions based on your analysis. If you're a curious Python programmer, a data scientist, or a CNA specialist interested in mechanizing mundane tasks, you'll increase your productivity exponentially. Complex network analysis used to be done by hand or with non-programmable network analysis tools, but

not anymore! You can now automate and program these tasks in Python. Complex networks are collections of connected items, words, concepts, or people. By exploring their structure and individual elements, we can learn about their meaning, evolution, and resilience. Starting with simple networks, convert real-life and synthetic network graphs into networkx data structures. Look at more sophisticated networks and learn more powerful machinery to handle centrality calculation, blockmodeling, and clique and community detection. Get familiar with presentation-quality network visualization tools, both programmable and interactive--such as Gephi, a CNA explorer. Adapt the patterns from the case studies to your problems. Explore big networks with NetworKit, a high-performance networkx substitute. Each part in the book gives you an overview of a class of networks, includes a practical study of networkx functions and techniques, and concludes with case studies from various fields, including social networking, anthropology, marketing, and sports analytics. Combine your CNA and Python programming skills to become a better network analyst, a more accomplished data scientist, and a more versatile programmer. What You Need: You will need a Python 3.x installation with the following additional modules: Pandas (>=0.18), NumPy (>=1.10), matplotlib (>=1.5), networkx (>=1.11), python-louvain (>=0.5), NetworKit (>=3.6), and generalizesimilarity. We recommend using the Anaconda distribution that comes with all these modules, except for python-louvain, NetworKit, and generalizedsimilarity, and works on all major modern operating systems.

This introduction to computational geometry focuses on algorithms. Motivation is provided from the application areas as all techniques are related to particular applications in robotics, graphics, CAD/CAM, and geographic information systems. Modern insights in computational geometry are used to provide solutions that are both efficient and easy to understand and implement.

Deep learning is often viewed as the exclusive domain of math PhDs and big tech companies. But as this hands-on guide demonstrates, programmers comfortable with Python can achieve impressive results in deep learning with little math background, small amounts of data, and minimal code. How? With fastai, the first library to provide a consistent interface to the most frequently used deep learning applications. Authors Jeremy Howard and Sylvain Gugger, the creators of fastai, show you how to train a model on a wide range of tasks using fastai and PyTorch. You'll also dive progressively further into deep learning theory to gain a complete understanding of the algorithms behind the scenes. Train models in computer vision, natural language processing, tabular data, and collaborative filtering Learn the latest deep learning techniques that matter most in practice Improve accuracy, speed, and reliability by understanding how deep learning models work Discover how to turn your models into web applications Implement deep learning algorithms from scratch Consider the ethical implications of your work Gain insight from the foreword by PyTorch cofounder, Soumith Chintala

Quantum computers are set to kick-start a second computing revolution in an exciting and intriguing way. Learning to program a Quantum Processing Unit (QPU) is not only fun and exciting, but it's a way to get your foot in the door. Like learning any kind of programming, the best way to proceed is by getting your hands dirty and diving into code. This practical book uses publicly available quantum computing engines, clever notation, and a programmer's mindset to get you started. You'll be able to build up the intuition, skills, and tools needed to start writing quantum programs and solve problems that you care about.

Computer software and technologies are advancing at an amazing rate. The accessibility of these software sources allows for a wider power among common users as well as rapid advancement in program development and operating information. Free and Open Source Software in Modern Data Science and Business Intelligence: Emerging Research and Opportunities is a critical scholarly resource that examines the differences between the two types of software, integral in the FOSS movement, and their effect on the distribution and use of software. Featuring coverage on a wide range of topics, such as FOSS Ecology, graph mining, and project tasks, this book is geared towards academicians, researchers, and students interested in current research on the growing importance of FOSS and its expanding reach in IT infrastructure.

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.

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. Water is a finite and non-substitutable resource. As the foundation of life, societies and economies, it carries multiple values and benefits. But unlike most other natural resources, it has proven extremely difficult to determine its true 'value'. The 2021 edition of the United Nations World Water Development Report, titled "Valuing Water" assesses the current status of and challenges to the valuation of water across different sectors and perspectives and identifies ways in which valuation can be promoted as a tool to help improve its management and achieve global sustainable development.

"We finally have the definitive treatise on PyTorch! It covers the basics and abstractions in great detail. I hope this book becomes your extended reference document." —Soumith Chintala, co-creator of PyTorch Key Features Written by PyTorch's creator and key contributors Develop deep learning models in a familiar Pythonic way Use PyTorch to build an image classifier for cancer detection Diagnose problems with your neural network and improve training with data augmentation Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Every other day we hear about new ways to put deep learning to good use: improved medical imaging, accurate credit card fraud detection, long range weather forecasting, and more. PyTorch puts these superpowers in your hands. Instantly familiar to anyone who knows Python data tools like NumPy and Scikit-learn, PyTorch simplifies deep learning without sacrificing advanced features. It's great for building quick models, and it scales smoothly from laptop to enterprise. Deep Learning with PyTorch teaches you to create deep

learning and neural network systems with PyTorch. This practical book gets you to work right away building a tumor image classifier from scratch. After covering the basics, you'll learn best practices for the entire deep learning pipeline, tackling advanced projects as your PyTorch skills become more sophisticated. All code samples are easy to explore in downloadable Jupyter notebooks. What You Will Learn Understanding deep learning data structures such as tensors and neural networks Best practices for the PyTorch Tensor API, loading data in Python, and visualizing results Implementing modules and loss functions Utilizing pretrained models from PyTorch Hub Methods for training networks with limited inputs Sifting through unreliable results to diagnose and fix problems in your neural network Improve your results with augmented data, better model architecture, and fine tuning This Book Is Written For For Python programmers with an interest in machine learning. No experience with PyTorch or other deep learning frameworks is required. About The Authors Eli Stevens has worked in Silicon Valley for the past 15 years as a software engineer, and the past 7 years as Chief Technical Officer of a startup making medical device software. Luca Antiga is co-founder and CEO of an AI engineering company located in Bergamo, Italy, and a regular contributor to PyTorch. Thomas Viehmann is a Machine Learning and PyTorch speciality trainer and consultant based in Munich, Germany and a PyTorch core developer. Table of Contents PART 1 - CORE PYTORCH 1 Introducing deep learning and the PyTorch Library 2 Pretrained networks 3 It starts with a tensor 4 Real-world data representation using tensors 5 The mechanics of learning 6 Using a neural network to fit the data 7 Telling birds from airplanes: Learning from images 8 Using convolutions to generalize PART 2 - LEARNING FROM IMAGES IN THE REAL WORLD: EARLY DETECTION OF LUNG CANCER 9 Using PyTorch to fight cancer 10 Combining data sources into a unified dataset 11 Training a classification model to detect suspected tumors 12 Improving training with metrics and augmentation 13 Using segmentation to find suspected nodules 14 End-to-end nodule analysis, and where to go next PART 3 - DEPLOYMENT 15 Deploying to production

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.

Make your good Python code even better by following proven and effective pythonic programming tips. Avoid logical errors that usually go undetected by Python linters and code formatters, such as frequent data look-ups in long lists, improper use of local and global variables, and mishandled user input. Discover rare language features, like rational numbers, set comprehensions,

counters, and pickling, that may boost your productivity. Discover how to apply general programming patterns, including caching, in your Python code. Become a better-than-average Python programmer, and develop self-documented, maintainable, easy-to-understand programs that are fast to run and hard to break. Python is one of the most popular and rapidly growing modern programming languages. With more than 200 standard libraries and even more third-party libraries, it reaches into the software development areas as diverse as artificial intelligence, bioinformatics, natural language processing, and computer vision. Find out how to improve your understanding of the spirit of the language by using one hundred pythonic tips to make your code safer, faster, and better documented. This programming style manual is a quick reference of helpful hints and a random source of inspiration. Choose the suitable data structures for searching and sorting jobs and become aware of how a wrong choice may cause your application to be completely ineffective. Understand global and local variables, class and instance attributes, and information-hiding techniques. Create functions with flexible interfaces. Manage intermediate computation results by caching them in files and memory to improve performance and reliability. Polish your documentation skills to make your code easy for other programmers to understand. As a bonus, discover Easter eggs cleverly planted in the standard library by its developers. Polish, secure, and speed-up your Python applications, and make them easier to maintain by following pythonic programming tips. What You Need: You will need a Python interpreter (ideally, version 3.4 or above) and the standard Python library that usually comes with the interpreter.

Go from messy, unstructured artifacts stored in SQL and NoSQL databases to a neat, well-organized dataset with this quick reference for the busy data scientist. Understand text mining, machine learning, and network analysis; process numeric data with the NumPy and Pandas modules; describe and analyze data using statistical and network-theoretical methods; and see actual examples of data analysis at work. This one-stop solution covers the essential data science you need in Python. Data science is one of the fastest-growing disciplines in terms of academic research, student enrollment, and employment. Python, with its flexibility and scalability, is quickly overtaking the R language for data-scientific projects. Keep Python data-science concepts at your fingertips with this modular, quick reference to the tools used to acquire, clean, analyze, and store data. This one-stop solution covers essential Python, databases, network analysis, natural language processing, elements of machine learning, and visualization. Access structured and unstructured text and numeric data from local files, databases, and the Internet. Arrange, rearrange, and clean the data. Work with relational and non-relational databases, data visualization, and simple predictive analysis (regressions, clustering, and decision trees). See how typical data analysis problems are handled. And try your hand at your own solutions to a variety of medium-scale projects that are fun to work on and look good on your resume. Keep this handy quick guide at your side whether you're a student, an entry-level data science professional converting from R to Python, or a seasoned Python developer who doesn't want to memorize every function and option. What You Need: You need a decent distribution of Python 3.3 or above that includes at least NLTK, Pandas, NumPy, Matplotlib, Networkx, SciKit-Learn, and BeautifulSoup. A great distribution that meets the requirements is Anaconda, available for free from www.continuum.io. If you plan to set up your own database

servers, you also need MySQL (www.mysql.com) and MongoDB (www.mongodb.com). Both packages are free and run on Windows, Linux, and Mac OS.

An exploration of current theories in quantum mechanics considers the feasibility of teleportation, sharing Einstein's entanglement studies, the discoveries from new experiments, and the implications of entanglement capabilities. Reprint.

Master machine learning with SAS Viya! Machine learning can feel intimidating for new practitioners. Machine Learning with SAS Viya provides everything you need to know to get started with machine learning in SAS Viya, including decision trees, neural networks, and support vector machines. The analytics life cycle is covered from data preparation and discovery to deployment. Working with open-source code? Machine Learning with SAS Viya has you covered – step-by-step instructions are given on how to use SAS Model Manager tools with open source. SAS Model Studio features are highlighted to show how to carry out machine learning in SAS Viya. Demonstrations, practice tasks, and quizzes are included to help sharpen your skills. In this book, you will learn about: Supervised and unsupervised machine learning Data preparation and dealing with missing and unstructured data Model building and selection Improving and optimizing models Model deployment and monitoring performance

Bayesian Networks in R with Applications in Systems Biology is unique as it introduces the reader to the essential concepts in Bayesian network modeling and inference in conjunction with examples in the open-source statistical environment R. The level of sophistication is also gradually increased across the chapters with exercises and solutions for enhanced understanding for hands-on experimentation of the theory and concepts. The application focuses on systems biology with emphasis on modeling pathways and signaling mechanisms from high-throughput molecular data. Bayesian networks have proven to be especially useful abstractions in this regard. Their usefulness is especially exemplified by their ability to discover new associations in addition to validating known ones across the molecules of interest. It is also expected that the prevalence of publicly available high-throughput biological data sets may encourage the audience to explore investigating novel paradigms using the approaches presented in the book.

This book is for moderate to advanced PostgreSQL database professionals who wish to extend PostgreSQL, utilizing the most updated features of PostgreSQL 9.4. For a better understanding of this book, familiarity with writing SQL, a basic idea of query tuning, and some coding experience in your preferred language is expected.

A laboratory study that investigates how algorithms come into existence. Algorithms--often associated with the terms big data, machine learning, or artificial intelligence--underlie the technologies we use every day, and disputes over the consequences, actual or potential, of new algorithms arise regularly. In this book, Florian Jaton offers a new way to study computerized methods, providing an account of where algorithms come from and how they are constituted, investigating

the practical activities by which algorithms are progressively assembled rather than what they may suggest or require once they are assembled.

The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example and problem-oriented, where the applications are taken from mathematics, numerical calculus, statistics, physics, biology and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book. Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science. From the reviews: Langtangen ... does an excellent job of introducing programming as a set of skills in problem solving. He guides the reader into thinking properly about producing program logic and data structures for modeling real-world problems using objects and functions and embracing the object-oriented paradigm. ... Summing Up: Highly recommended. F. H. Wild III, Choice, Vol. 47 (8), April 2010 Those of us who have learned scientific programming in Python 'on the streets' could be a little jealous of students who have the opportunity to take a course out of Langtangen's Primer." John D. Cook, The Mathematical Association of America, September 2011 This book goes through Python in particular, and programming in general, via tasks that scientists will likely perform. It contains valuable information for students new to scientific computing and would be the perfect bridge between an introduction to programming and an advanced course on numerical methods or computational science. Alex Small, IEEE, CiSE Vol. 14 (2), March /April 2012 "This fourth edition is a wonderful, inclusive textbook that covers pretty much everything one needs to know to go from zero to fairly sophisticated scientific programming in Python..." Joan Horvath, Computing Reviews, March 2015

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.

This open access book covers the use of data science, including advanced machine learning, big data analytics, Semantic Web technologies, natural language processing, social media analysis, time series analysis, among others, for applications in economics and finance. In addition, it shows some successful applications of advanced data science solutions used to extract new knowledge from data in order to improve economic forecasting models. The book starts with an introduction on the use of data science technologies in economics and finance and is followed by thirteen chapters showing success stories of the application of specific data science methodologies, touching on particular topics related to novel big data sources and technologies for economic analysis (e.g. social media and news); big data models leveraging on supervised/unsupervised (deep) machine learning; natural language processing to build economic and financial indicators; and forecasting and nowcasting of economic variables through time series analysis. This book is relevant to all stakeholders involved in digital and data-intensive research in economics and finance, helping them to understand the main opportunities and challenges, become familiar with the latest methodological findings, and learn how to use and evaluate the performances of novel tools and frameworks. It primarily targets data scientists and business analysts exploiting data science technologies, and it will also be a useful resource to research students in disciplines and courses related to these topics. Overall, readers will learn modern and effective data science solutions to create tangible innovations for economic and financial applications.

Get to grips with processing large volumes of data and presenting it as engaging, interactive insights using Spark and Python. Key Features Get a hands-on, fast-paced introduction to the Python data science stack Explore ways to create useful metrics and statistics from large datasets Create detailed analysis reports with real-world data Book Description Processing big data in real time is challenging due to scalability, information inconsistency, and fault tolerance. Big Data Analysis with Python teaches you how to use tools that can control this data avalanche for you. With this book, you'll learn practical techniques to aggregate data into useful dimensions for posterior analysis, extract statistical measurements, and transform datasets into features for other systems. The book begins with an introduction to data manipulation in Python using pandas. You'll then get familiar with statistical analysis and plotting techniques. With multiple hands-on activities in store, you'll be able to analyze data that is distributed on several computers by using Dask. As you progress, you'll study how to aggregate data for plots when the entire data cannot be accommodated in memory. You'll also explore Hadoop (HDFS and YARN), which will help you tackle larger datasets. The book also covers Spark and explains how it interacts with other tools. By the end of this book, you'll be able to bootstrap your own Python environment, process large files, and manipulate data to generate statistics, metrics, and graphs. What you will learn Use

Python to read and transform data into different formats Generate basic statistics and metrics using data on disk Work with computing tasks distributed over a cluster Convert data from various sources into storage or querying formats Prepare data for statistical analysis, visualization, and machine learning Present data in the form of effective visuals Who this book is for Big Data Analysis with Python is designed for Python developers, data analysts, and data scientists who want to get hands-on with methods to control data and transform it into impactful insights. Basic knowledge of statistical measurements and relational databases will help you to understand various concepts explained in this book. Reusing well-written, well-debugged, and well-tested code improves productivity, code quality, and software configurability and relieves pressure on software developers. When you organize your code into self-contained modular units, you can use them as building blocks for your future projects and share them with other programmers, if needed. Understand the benefits and downsides of seven code reuse models so you can confidently reuse code at any development stage. Create static and dynamic libraries in C and Python, two of the most popular modern programming languages. Adapt your code for the real world: deploy shared functions remotely and build software that accesses them using remote procedure calls. Avoid the drawbacks and harness the benefits associated with seven code reuse models. Create static and dynamic libraries in C and Python, deploy shared functions remotely, and build software that makes intelligent use of remote procedure calls. In no time at all, you'll develop the confidence to reuse code at any stage of real-world development. This one-stop solution covers the complete build cycle: editing, compiling, linking, and running a ready program. Apply Linux/macOS power software development tools, such as ld, ldd, ranlib, and nm, to construct and explore state-of-the-art function libraries in C that could be linked with application-specific code either permanently or for the duration of execution. Learn why Python has modules for reuse and how they differ from C object files and libraries. Understand the risks and other negative implications of sharing and reuse. As a bonus, distill the dependencies between your project's components and automate and optimize your build process with the "make" utility. Whether you are an amateur coder or an experienced developer, become a more productive and resourceful programmer by reusing previously written code. What You Need: To compile and run the C examples mentioned in the book, you need a decent C compiler (GCC is the best, but Intel and Microsoft would probably work, too) and a set of C development tools: maker (make), linker (ld), file, strip, ldd, and ranlib. Again, the GNU development toolset works marvels; other toolsets may or may not work. All examples in the book have been tested on a Linux computer but will most likely work on macOS. For the Python examples, a Python-3.x interpreter is all you want. No third-party modules are required.

Text data is important for many domains, from healthcare to marketing to the digital humanities, but specialized approaches are necessary to create features for machine learning from language. Supervised Machine Learning for Text

Analysis in R explains how to preprocess text data for modeling, train models, and evaluate model performance using tools from the tidyverse and tidymodels ecosystem. Models like these can be used to make predictions for new observations, to understand what natural language features or characteristics contribute to differences in the output, and more. If you are already familiar with the basics of predictive modeling, use the comprehensive, detailed examples in this book to extend your skills to the domain of natural language processing. This book provides practical guidance and directly applicable knowledge for data scientists and analysts who want to integrate unstructured text data into their modeling pipelines. Learn how to use text data for both regression and classification tasks, and how to apply more straightforward algorithms like regularized regression or support vector machines as well as deep learning approaches. Natural language must be dramatically transformed to be ready for computation, so we explore typical text preprocessing and feature engineering steps like tokenization and word embeddings from the ground up. These steps influence model results in ways we can measure, both in terms of model metrics and other tangible consequences such as how fair or appropriate model results are.

This edition of the of "The Son of the Red Corsair" is the only English translation of the Italian "Il figlio del corsaro rosso" by Emilio Salgari, an Italian writer of adventure and science fiction stories for readers of all ages young at heart. His books are regarded as classics and are still in print many years after their initial publication. They have been translated in several languages and, besides Italy, they are especially popular in the Spanish speaking world. A prolific writer, Salgari authored 80 novels and about 150 short stories. A captivating mix of adventure, romance and comedy, The Son of The Red Corsair is the story of Enrico of Ventimiglia, an Italian gentleman disguised as a corsair, as he fights his way through the Spaniards conquerors of Central America in search of the half-sister he has never met, the child of his father's second wife, the daughter of Darien's Gran Cacique. In his adventures he is attended by a handful of colorful characters like the faithful Mendoza, Buttafuoco, a French gentleman turned buccaneer, and the boisterous Don Barrejo. Helping him are also the beautiful Marquise of Montelimar and the bands of the Pirates of the Caribbean.

Data Science con Pythondalle stringhe al machine learning, le tecniche essenziali per lavorare sui datiApogeo Editore This open access textbook provides the background needed to correctly use, interpret and understand statistics and statistical data in diverse settings. Part I makes key concepts in statistics readily clear. Parts I and II give an overview of the most common tests (t-test, ANOVA, correlations) and work out their statistical principles. Part III provides insight into meta-statistics (statistics of statistics) and demonstrates why experiments often do not replicate. Finally, the textbook shows how complex statistics can be avoided by using clever experimental design. Both non-scientists and students in Biology, Biomedicine and Engineering will benefit from the book by learning the statistical basis of scientific claims and by

discovering ways to evaluate the quality of scientific reports in academic journals and news outlets.

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.

Prolog is a programming language, but a rather unusual one. Prolog" is short for Programming with Logic", and the link with logic gives Prolog its special character. At the heart of Prolog lies a surprising idea: don't tell the computer what to do. Instead, describe situations of interest, and compute by asking questions. Prolog will logically deduce new facts about the situations and give its deductions back to us as answers. Why learn Prolog? For a start, its say what the problem is, rather than how to solve it" stance, means that it is a very high level language, good for knowledge rich applications such as artificial intelligence, natural language processing, and the semantic web. So by studying Prolog, you gain insight into how sophisticated tasks can be handled computationally. Moreover, Prolog requires a different mindset. You have to learn to see problems from a new perspective, declaratively rather than procedurally. Acquiring this mindset, and learning to appreciate the links between logic and programming, makes the study of Prolog both challenging and rewarding. Learn Prolog Now! is a practical introduction to this fascinating language. Freely available as a web-book since 2002 (see www.learnprolognow.org) Learn Prolog Now! has became one of the most popular introductions to the Prolog programming language, an introduction prized for its clarity and down-to-earth approach. It is widely used as a textbook at university departments around the world, and even more widely used for self study. College Publications is proud to present here the first hard-copy version of this online classic. Carefully revised in the light of reader's feedback, and now with answers to all the exercises, here you will find the essential material required to help you learn Prolog now.

Get complete instructions for manipulating, processing, cleaning, and crunching datasets in Python. Updated for Python 3.6, the second edition of this hands-on guide is packed with practical case studies that show you how to solve a broad set of data analysis problems effectively. You'll learn the latest versions of pandas, NumPy, IPython, and Jupyter in the process. Written by Wes McKinney, the creator of the Python pandas project, this book is a practical, modern introduction to data science tools in Python. It's ideal for analysts new to Python and for Python programmers new to data science and scientific computing. Data files and related material are available on GitHub. Use the IPython shell and Jupyter notebook for exploratory computing Learn basic and advanced features in NumPy (Numerical Python) Get started with data analysis tools in the pandas library Use flexible tools to load, clean, transform, merge, and reshape data Create informative visualizations with matplotlib Apply the pandas groupby facility to slice, dice, and summarize datasets Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples

This book presents conjectural advances in big data analysis, machine learning and computational intelligence, as well as their potential applications in scientific computing. It discusses major issues pertaining to big data analysis using computational intelligence techniques, and the conjectural elements are supported by simulation and modelling applications to help address real-world problems. An extensive bibliography is provided at the end of each chapter. Further, the main content is supplemented by a wealth of figures, graphs, and tables, offering a valuable guide for researchers in the field of big data analytics and computational intelligence.

Data Science for Supply Chain Forecast Data Science for Supply Chain Forecast is a book for practitioners focusing on data science and machine learning; it demonstrates how both are closely interlinked in order to create an advanced forecast for supply chain. As one will discover in this book, artificial intelligence (AI) & machine learning (ML) are not simply a question of coding skills. Using data science in order to solve a problem requires a scientific mindset more than coding skills. The story behind these models is one of experimentation, of observation and of constant questioning; a true scientific method must be applied to supply chain. In the data science field as well as that of the supply chain, simple questions do not come with simple answers. In order to resolve these questions, one needs to be both a scientist as well as to use the correct tools. In this book, we will discuss both. Is this Book for me? This book has been written for supply chain practitioners, forecasters and analysts who are looking to go the extra mile. You do not need technical IT skills to start using the models of this book. You do not need a dedicated server or expensive software licenses: you solely need your own computer. You do not need a PhD in mathematics: mathematics will only be utilized as a tool to tweak and understand the models. In the majority of the cases - especially when it comes to machine learning - a deep understanding of the mathematical inner workings of a model will not be necessary in order to optimize it and understand its limitations. Reviews "In an age where analytics and machine learning are taking on larger roles in the business

forecasting, Nicolas' book is perfect solution for professionals who need to combine practical supply chain experience with the mathematical and technological tools that can help us predict the future more reliably." Daniel Stanton - Author, Supply Chain Management For Dummies "Open source statistical toolkits have progressed tremendously over the last decade. Nicolas demonstrates that these toolkits are more than enough to start addressing real-world forecasting challenges as found in supply chains. Moreover, through its hands-on approach, this book is accessible to a large audience of supply chain practitioners. The supply chain of the 21st century will be data-driven and Nicolas gets it perfectly." Joannes Vermorel - CEO Lokad "This book is unique in its kind. It explains the basics of Python using basic traditional forecasting techniques and shows how machine learning is revolutionizing the forecasting domain. Nicolas has done an outstanding job explaining a technical subject in an easily accessible way. A must-read for any supply chain professional." Professor Bram Desmet - CEO Solventure "This book is before anything a practical and business-oriented "DIY" user manual to help planners move into 21st-century demand planning. The breakthrough comes from several tools and techniques available to all, and which thanks to Nicolas' precise and concrete explanations can now be implemented in real business environments by any "normal" planner. I can confirm that Nicolas' learnings are based on real-life experience and can tremendously help on improving top and bottom lines." Henri-Xavier Benoist - VP Supply Chain Bridegstone EMEA

PYTHON PROGRAMMING Programming is a complex process that needs practice and patience. Dealing with a complex programming language at the beginning may be overwhelming and will result in discouragement. THIS IS THE REASON WHY BEGINNERS SHOULD CHOOSE PROGRAMMING LANGUAGE THAT IS SIMPLE AND ROBUST A lot of beginners who stumble upon programming quicky change theri mind after dealing with few program practically. ARE YOU INTERESTED IN PROGRAMMING? Are you looking forward to solving real-world complex problems with the help of programming? if you are a beginner you should understand that Python is a programming language that you are waiting for. PYTHON is often heard in the programming community and consist of a lot of wonderful oper-source projects that can help you master the logical understanding of programming. The success of PYTHON is also due to its usage of procedure and object oriented praradigms in parallel nature. But are you anable to find a good learning path that can help you learn Python easily? Then YOU ARE LUCKY TO BE HERE! WE ARE INTRODUCING YOU TO NEW PYTHON BOOK! DOWNLOAD: PYTHON PROGRAMMING This is a comprehensive introduction to Python and its interlinking concepts that are important to be learnd to master the language perfectly. This book can also be used as a reference for advanced programmers. The goal of thi book is simple: we want youunderstand every fundamentals concept of Python in an easy way. thsi book is destined to make you feel better with Python syntax and helps you understand the ability of Python. The Goal of this book is to help programmers understand the importance of Python as a programming language. You will also learn: What is Python How to install in your system How to deal wit variabels and data type What are the basic operations of Python What is the object-oriented programming How to create funcion with Python How to use structure And lots more. Are you excited to learn more about Python and its components?Then what are you waiting for? GO AND

DOWNLOAD THIS BOOK AND START DEVELOPING PYTHON PROGRAMMING WITHIN NO TIME. SCROLL TO THE TOP OF THE PAGE AND SELECT BUY

Endorsed by top AI authors, academics and industry leaders, The Hundred-Page Machine Learning Book is the number one bestseller on Amazon and the most recommended book for starters and experienced professionals alike.

What others in the trenches say about The Pragmatic Programmer... "The cool thing about this book is that it's great for keeping the programming process fresh. The book helps you to continue to grow and clearly comes from people who have been there." —Kent Beck, author of Extreme Programming Explained: Embrace Change "I found this book to be a great mix of solid advice and wonderful analogies!" —Martin Fowler, author of Refactoring and UML Distilled "I would buy a copy, read it twice, then tell all my colleagues to run out and grab a copy. This is a book I would never loan because I would worry about it being lost." —Kevin Ruland, Management Science, MSG-Logistics "The wisdom and practical experience of the authors is obvious. The topics presented are relevant and useful.... By far its greatest strength for me has been the outstanding analogies—tracer bullets, broken windows, and the fabulous helicopter-based explanation of the need for orthogonality, especially in a crisis situation. I have little doubt that this book will eventually become an excellent source of useful information for journeymen programmers and expert mentors alike." —John Lakos, author of Large-Scale C++ Software Design "This is the sort of book I will buy a dozen copies of when it comes out so I can give it to my clients." —Eric Vought, Software Engineer "Most modern books on software development fail to cover the basics of what makes a great software developer, instead spending their time on syntax or technology where in reality the greatest leverage possible for any software team is in having talented developers who really know their craft well. An excellent book." —Pete McBreen, Independent Consultant "Since reading this book, I have implemented many of the practical suggestions and tips it contains. Across the board, they have saved my company time and money while helping me get my job done quicker! This should be a desktop reference for everyone who works with code for a living." —Jared Richardson, Senior Software Developer, iRenaissance, Inc. "I would like to see this issued to every new employee at my company...." —Chris Cleeland, Senior Software Engineer, Object Computing, Inc. "If I'm putting together a project, it's the authors of this book that I want. . . . And failing that I'd settle for people who've read their book." —Ward Cunningham Straight from the programming trenches, The Pragmatic Programmer cuts through the increasing specialization and technicalities of modern software development to examine the core process--taking a requirement and producing working, maintainable code that delights its users. It covers topics ranging from personal responsibility and career development to architectural techniques for keeping your code flexible and easy to adapt and reuse. Read this book, and you'll learn how to Fight software rot; Avoid the trap of duplicating knowledge; Write flexible, dynamic, and adaptable code; Avoid programming by coincidence; Bullet-proof your code with contracts, assertions, and exceptions; Capture real requirements; Test ruthlessly and effectively; Delight your users; Build teams of pragmatic programmers; and Make your developments more precise with automation. Written as a series of self-contained sections and filled with entertaining anecdotes, thoughtful examples, and interesting analogies, The Pragmatic Programmer

illustrates the best practices and major pitfalls of many different aspects of software development. Whether you're a new coder, an experienced programmer, or a manager responsible for software projects, use these lessons daily, and you'll quickly see improvements in personal productivity, accuracy, and job satisfaction. You'll learn skills and develop habits and attitudes that form the foundation for long-term success in your career. You'll become a Pragmatic Programmer.

The #1 New York Times–bestselling author of Fear of Flying brings the seductive Greek poet to life in this "enormously entertaining" tale (Booklist). As she stands poised at the edge of a precipice in the shadow of the sanctuary of Apollo, the greatest love poet who ever was or ever will be recalls the eventful fifty years that have led her to this moment. It was love that seduced her, at age sixteen, into an ill-fated plot with the poet Alcaeus to depose the despot of the island of Lesbos. It was love that made her trade the unwanted marriage bed of an old, despised, and drunken husband for a seemingly endless series of lovers, both male and female. For Sappho, life has always been a banquet to be savored to the fullest, a strange and sensual odyssey that has carried her to the far corners of the ancient world. Devoted to the goddess Aphrodite and granted the gift of immortal song, she has followed her magnificent destiny from Delphi to Egypt, to the land of the Amazons, the realm of the centaurs, and into the stygian depths of Hades itself, often in the company of her companion and friend, the fabulist slave Aesop. Through every grand affair and every wild adventure, she has remained forever true to her heart, her passion, and herself, right up to this, the end of everything. Combining evocative and realistic detail with unabashedly outrageous invention, Erica Jong's Sappho's Leap is a flawless gem of historical fiction boldly imagined by one of America's most enthralling storytellers. This ebook features an illustrated biography of Erica Jong including rare photos and never-before-seen documents from the author's personal collection.