Python 1401 Installation Guide Download

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Scientific Programming and Computer Architecture Springer

Practical Guide to Logistic Regression covers the key points of the basic logistic regression model and illustrates how to use it properly to model a binary response variable. This powerful methodology can be used to analyze data from various fields, including medical and health outcomes research, business analytics and data science, ecology, fisheries, astronomy, transportation, insurance, economics, recreation, and sports. By harnessing the capabilities of the logistic model, analysts can better understand their data, make appropriate predictions and classifications, and determine the odds of one value of a predictor compared to another. Drawing on his many years of teaching logistic regression, using logistic-based models in research, and writing about the subject, Professor Hilbe focuses on the most important features of the logistic model. Serving as a guide between the author and readers, the book explains how to construct a logistic model, interpret coefficients and odds ratios, predict probabilities and their standard errors based on the model, and evaluate the model as to its fit. Using a variety of real data examples, mostly from health outcomes, the author offers a basic step-by-step guide to developing and interpreting observation and grouped logistic models as well as penalized and exact logistic regression. He also gives a step-by-step guide to modeling Bayesian logistic regression. R statistical software is used throughout the book to display the statistical models while SAS and Stata codes for all examples are included at the end of each chapter. The example code can be adapted to readers' own analyses. All the code is available on the author's website.

Digital Signal Processing Using MATLAB Cambridge University Press

Build your own secret laboratory with 30 coding and electronic projects! The BBC micro:bit is a tiny, cheap, yet surprisingly powerful computer that you can use to build cool things and experiment with code. The 30 simple projects and experiments in this book will show you how to use the micro:bit to build a secret science lab complete with robots, door alarms, lie detectors, and more--as you learn basic coding and electronics skills. Here are just some of the projects you'll build: A "light guitar" you can play just by moving your fingers A working lie detector A self-watering plant care system A two-wheeled robot A talking robotic head with moving eyes A door alarm made with magnets Learn to code like a Mad Scientist!

`Operating Systems` IBM Redbooks

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bookdown: Authoring Books and Technical Documents with R Markdown presents a much easier way
to write books and technical publications than traditional tools such as LaTeX and Word. The
bookdown package inherits the simplicity of syntax and flexibility for data analysis from R
Markdown, and extends R Markdown for technical writing, so that you can make better use of
document elements such as figures, tables, equations, theorems, citations, and references.
Similar to LaTeX, you can number and cross-reference these elements with bookdown. Your
document can even include live examples so readers can interact with them while reading the
book. The book can be rendered to multiple output formats, including LaTeX/PDF, HTML, EPUB,
and Word, thus making it easy to put your documents online. The style and theme of these
output formats can be customized. We used books and R primarily for examples in this book, but
bookdown is not only for books or R. Most features introduced in this book also apply to other
types of publications: journal papers, reports, dissertations, course handouts, study notes,
and even novels. You do not have to use R, either. Other choices of computing languages
include Python, C, C++, SQL, Bash, Stan, JavaScript, and so on, although R is best supported.
You can also leave out computing, for example, to write a fiction. This book itself is an
example of publishing with bookdown and R Markdown, and its source is fully available on
GitHub.
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Hands-On Machine Learning with scikit-learn and Scientific Python Toolkits Springer Science & Business Media

Building desktop applications doesn't have to be difficult. Using Python & Qt5 you can create fully functional desktop apps in minutes. This is the 5th Edition of Create GUI Applications, updated for 2021 & PyQt6 Starting from the very basics, this book takes you on a tour of the key features of PyQt6 you can use to build real-life applications. Learn the fundamental building blocks of PyQt6 applications — Widgets, Layouts & Signals and learn how PyQt6 uses the event loop to handle and respond to user input. Design beautiful UIs with Qt Designer and customize the look and feel of your applications with Qt Style Sheets and custom widgets. Use Qt's MVC-like ModelViews framework to connect data sources to your widgets, including SQL databases, numpy and pandas data tables, to build-data driven application. Visualize data using matplotlib & PyQtGraph and connect with external data sources to build live dashboards. Learn how to use threads and processes to manage long-running tasks and

communicate with external services. Parse data and visualize the output in logs and progress bars. The book includes usability and architectural tips to help you build maintainable and usable PyQt6 applications from the start. Finally, once your application is ready to be released, discover how to package it up into professional-quality installers, ready to ship. The book includes - 665 pages of hands-on PyQt6 exercises - 211 code examples to experiment with - Includes 4 example apps - Compatible with Python 3.6+ - Code free to reuse in your own projects

Computational Drug Design PHI Learning Pvt. Ltd.

This textbook presents both a conceptual framework and detailed implementation guidelines for computer science (CS) teaching. Updated with the latest teaching approaches and trends, and expanded with new learning activities, the content of this new edition is clearly written and structured to be applicable to all levels of CS education and for any teaching organization. Features: provides 110 detailed learning activities; reviews curriculum and cross-curriculum topics in CS; explores the benefits of CS education research; describes strategies for cultivating problem-solving skills, for assessing learning processes, and for dealing with pupils' misunderstandings; proposes active-learning-based classroom teaching methods, including lab-based teaching; discusses various types of questions that a CS instructor or trainer can use for a range of teaching situations; investigates thoroughly issues of lesson planning and course design; examines the first field teaching experiences gained by CS teachers.

Annotated Algorithms in Python Manning

Summary AWS Lambda in Action is an example-driven tutorial that teaches you how to build applications that use an event-driven approach on the back end. Foreword by James Governor. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology With AWS Lambda, you write your code and upload it to the AWS cloud. AWS Lambda responds to the events triggered by your application or your users, and automatically manages the underlying computer resources for you. Back-end tasks like analyzing a new document or processing requests from a mobile app are easy to implement. Your application is divided into small functions, leading naturally to a reactive architecture and the adoption of microservices. About the Book AWS Lambda in Action is an example-driven tutorial that teaches you how to build applications that use an event-driven approach on the back-end. Starting with an overview of AWS Lambda, the book moves on to show you common examples and patterns that you can use to call Lambda functions from a web page or a mobile app. The second part of the book puts these smaller examples together to build larger applications. By the end, you'll be ready to create applications that take advantage of the high availability, security, performance, and scalability of AWS. What's Inside Create a simple API Create an event-driven media-sharing application Secure access to your application in the cloud Use functions from different clients like web pages or mobile apps Connect your application with external services About the Reader Requires basic knowledge of JavaScript. Some examples are also provided in Python. No AWS experience is assumed. About the Author Danilo Poccia is a technical evangelist at Amazon Web Services and a frequent speaker at public events and workshops. Table of Contents Running functions in the cloud Your first Lambda function Your function as a web API Managing security Using standalone functions Managing identities Calling functions from a client Designing an authentication service Implementing an authentication service Adding more features to the authentication service Building a media-sharing application Why event-driven? Improving development and testing Automating deployment Automating infrastructure management Calling external services Receiving events from other services PART 1 - FIRST STEPS PART 2 - BUILDING EVENT-DRIVEN APPLICATIONS PART 3 - FROM DEVELOPMENT TO PRODUCTION PART 4 - USING EXTERNAL SERVICES

Emerging Photovoltaic Technologies "O'Reilly Media, Inc."

This IBM® Redbooks® publication documents and addresses topics to set up a complete infrastructure environment and tune the applications to use an IBM POWER9TM hardware architecture with the technical computing software stack. This publication is driven by a CORAL project solution. It explores, tests, and documents how to implement an IBM High-Performance Computing (HPC) solution on a POWER9 processor-based system by using IBM technical innovations to help solve challenging scientific, technical, and business problems. This book documents the HPC clustering solution with InfiniBand on IBM Power SystemsTM AC922 8335-GTH and 8335-GTX servers with NVIDIA Tesla V100 SXM2 graphics processing units (GPUs) with NVLink, software components, and the IBM SpectrumTM Scale parallel file system. This solution includes recommendations about the components that are used to provide a cohesive clustering environment that includes job scheduling, parallel application tools, scalable file systems, administration tools, and a high-speed interconnect. This book is divided into three parts: Part 1 focuses on the planners of the solution, Part 2 focuses on the administrators, and Part 3 focuses on the developers. This book targets technical professionals (consultants, technical support staff, IT architects, and IT specialists) who are responsible for delivering cost-effective HPC solutions that help uncover insights among clients' data so that they can act to optimize business results, product development, and scientific discoveries.

Modeling and Simulation in Python IBM Redbooks

Learn how to build dynamic web applications with Express, a key component of the Node/JavaScript development stack. In this hands-on guide, author Ethan Brown teaches you the fundamentals through the development of a fictional application that exposes a public website and a RESTful API. You'll also learn web architecture best practices to help you build single-page, multi-page, and hybrid web apps with Express. Express strikes a balance between a robust framework and no framework at all, allowing you a free hand in your architecture choices. With this book, frontend and backend engineers familiar with JavaScript will discover new ways of looking at web development. Create webpage templating system for rendering dynamic data Dive into request and response objects, middleware, and URL routing Simulate a production environment for testing and development Focus on persistence with document databases, particularly MongoDB Make your resources available to other programs with RESTful APIs Build secure apps with authentication, authorization, and HTTPS Integrate with social media, geolocation, and other third-party services Implement a plan for launching and maintaining your app Learn critical debugging skills This book covers Express 4.0.

Web Development with Node and Express John Wiley & Sons

This IBM® Redbooks® publication focuses on gathering the correct technical information, and laying out simple guidance for optimizing code performance on IBM

POWER8® processor-based systems that run the IBM AIX®, IBM i, or Linux operating systems. There is straightforward performance optimization that can be performed with a minimum of effort and without extensive previous experience or in-depth knowledge. The POWER8 processor contains many new and important performance features, such as support for eight hardware threads in each core and support for transactional memory. The POWER8 processor is a strict superset of the IBM POWER7+TM processor, and so all of the performance features of the POWER7+ processor, such as multiple page sizes, also appear in the POWER8 processor. Much of the technical information and guidance for optimizing performance on POWER8 processors that is presented in this guide also applies to POWER7+ and earlier processors, except where the guide explicitly indicates that a feature is new in the POWER8 processor. This guide strives to focus on optimizations that tend to be positive across a broad set of IBM POWER® processor chips and systems. Specific guidance is given for the POWER8 processor; however, the general guidance is applicable to the IBM POWER7+, IBM POWER7®, IBM POWER6®, IBM POWER5, and even to earlier processors. This guide is directed at personnel who are responsible for performing migration and implementation activities on POWER8 processor-based systems. This includes system administrators, system architects, network administrators, information architects, and database administrators (DBAs).

Python Machine Learning No Starch Press
Turn Vim into a full-blown development environment using Vim 8's new features and this sequel to the beloved bestseller Practical Vim. Integrate your editor with tools for building, testing, linting, indexing, and searching your codebase. Discover the future of Vim with Neovim: a fork of Vim that includes a built-in terminal emulator that will transform your workflow. Whether you choose to switch to Neovim or stick with Vim 8, you'll be a better developer. A serious tool for programmers and web developers, no other text editor comes close to Vim for speed and efficiency. Make Vim the centerpiece of a Unix-based IDE as you discover new ways to work with Vim 8 and Neovim in more than 20 hands-on tips. Execute tasks asynchronously, allowing you to continue in Vim while linting, grepping, building a project, or running a test suite. Install plugins to be loaded on startup - or on-demand when you need them - with Vim 8's new package support. Save and restore sessions, enabling you to quit Vim and restart again while preserving your window layout and undo history. Use Neovim as a drop-in replacement for Vim - it supports all of the features Vim 8 offers and more, including an integrated terminal that lets you quickly perform interactive commands. And if you enjoy using tmux and Vim together, you'll love Neovim's terminal emulator, which lets you run an interactive shell in a buffer. The terminal buffers fit naturally with Vim's split windows, and you can use Normal mode commands to scroll, search, copy, and paste. On top of all that: Neovim's terminal buffers are scriptable. With Vim at the core of your development environment, you'll become a faster and more efficient developer. What You Need: You'll need a Unix-based environment and an up-to-date release of Vim (8.0 or newer). For the tips about running a terminal emulator, you'll need to install Neovim.

Performance Optimization and Tuning Techniques for IBM Power Systems Processors Including IBM POWER8 MIT Press
This IBM® RedpaperRedbooks® publication describes the concepts, architecture, and implementation of the IBM DS8900F family. The WhitepaperRedpaperbook provides reference information to assist readers who need to plan for, install, and configure the DS8900F systems. This edition applies to DS8900F systems with IBM DS8000® Licensed Machine Code (LMC) 7.9.20 (bundle version 89.20.xx.x), referred to as Release 9.2. The DS8900F is an all-flash system exclusively, and it offers three classes: DS8980F: Analytic Class: The DS8980F Analytic Class offers best performance for organizations that want to expand their workload possibilities to artificial intelligence (AI), Business Intelligence (BI), and machine learning (ML). IBM DS8950F: Agility Class all-flash: The Agility Class consolidates all your mission-critical workloads for IBM Z®, IBM LinuxONE, IBM Power Systems, and distributed environments under a single all-flash storage solution.. IBM DS8910F: Flexibility Class all-flash: The Flexibility Class reduces complexity while addressing various workloads at the lowest DS8900F family entry cost. . TThe DS8900F architecture relies on powerful IBM POWER9TM processor-based servers that manage the cache to streamline disk input/output (I/O), which maximizes performance and throughput. These capabilities are further enhanced by High-Performance Flash Enclosures (HPFE) Gen2. Like its predecessors, the DS8900F supports advanced disaster recovery (DR) solutions, business continuity solutions, and thin provisioning. The IBM DS8910F Rack-Mounted model 993 is described in IBM DS8910F Model 993 Rack-Mounted Storage System Release 9.1, REDP-5566.

Modern Vim Cambridge University Press
Develop real-world applications powered by the latest advances in intelligent systems Key Features Gain real-world contextualization using deep learning problems concerning research and application Get to know the best practices to improve and optimize your machine learning systems and algorithms Design and implement machine intelligence using real-world AI-based examples Book Description This Learning Path offers practical knowledge and techniques you need to create and contribute to machine learning, deep learning, and modern data analysis. You will be introduced to various machine learning and deep learning algorithms from scratch, and show you how to apply them to practical industry challenges using realistic and interesting examples. You will learn to build powerful, robust, and accurate predictive models with the power of TensorFlow, combined with other open-source Python libraries. Throughout the Learning Path, you'll learn how to develop deep learning applications for machine learning systems. Discover how to attain deep learning programming on GPU in a distributed way. By the end of this Learning Path, you know the fundamentals of AI and have worked through a number of case studies that will help you apply your skills to real-world projects. This Learning Path includes content from the following Packt products: Artificial Intelligence By Example by Denis Rothman Python Deep Learning Projects by Matthew Lamons, Rahul Kumar, and Abhishek Nagaraja Hands-On Artificial Intelligence with TensorFlow by Amir Ziai, Ankit Dixit What you will learn Use adaptive thinking to solve real-life AI case studies Rise beyond being a modern-day factory code worker Understand future AI solutions and adapt quickly to them Master deep neural network implementation using TensorFlow Predict continuous target outcomes using regression analysis Dive deep into textual and social media data using sentiment analysis Who this book is for This Learning Path is for anyone who wants to understand the fundamentals of Artificial Intelligence and implement it practically by devising smart solutions. You will learn to extend your machine learning and deep learning knowledge by creating practical AI smart solutions. Prior experience with Python and statistical knowledge is essential to make the most out of this Learning Path.

Guide to Teaching Computer Science Springer
Integrate scikit-learn with various tools such as NumPy, pandas, imbalanced-learn, and scikit-surprise and use it to solve real-world machine learning problems Key FeaturesDelve into machine learning with this comprehensive guide to scikit-learn and scientific PythonMaster the art of data-driven problem-solving with hands-on examplesFoster your theoretical and practical knowledge of supervised and unsupervised machine learning algorithmsBook Description Machine learning is applied everywhere, from business to research and academia, while scikit-learn is a versatile library that is popular among machine learning practitioners. This book serves as a practical guide for anyone looking to provide hands-on machine learning solutions with scikit-learn and Python toolkits. The book begins with an explanation of machine learning concepts and fundamentals, and strikes a balance between theoretical concepts and their applications. Each chapter covers a different set of algorithms, and shows you how to use them to solve real-life problems. You'll also learn about various key supervised and unsupervised machine learning algorithms using practical examples. Whether it is an instance-based learning algorithm, Bayesian estimation, a deep neural network, a tree-based ensemble, or a recommendation system, you'll gain a thorough understanding of its theory and learn when to apply it. As you advance, you'll learn how to deal with unlabeled data and when to use different

clustering and anomaly detection algorithms. By the end of this machine learning book, you'll have learned how to take a data-driven approach to provide end-to-end machine learning solutions. You'll also have discovered how to formulate the problem at hand, prepare required data, and evaluate and deploy models in production. What you will learnUnderstand when to use supervised, unsupervised, or reinforcement learning algorithmsFind out how to collect and prepare your data for machine learning tasksTackle imbalanced data and optimize your algorithm for a bias or variance tradeoffApply supervised and unsupervised algorithms to overcome various machine learning challengesEmploy best practices for tuning your algorithm's hyper parametersDiscover how to use neural networks for classification and regressionBuild, evaluate, and deploy your machine learning solutions to productionWho this book is for This book is for data scientists, machine learning practitioners, and anyone who wants to learn how machine learning algorithms work and to build different machine learning models using the Python ecosystem. The book will help you take your knowledge of machine learning to the next level by grasping its ins and outs and tailoring it to your needs. Working knowledge of Python and a basic understanding of underlying mathematical and statistical concepts is required.

Knowledge Graphs and Big Data Processing Chapman and Hall/CRC
This open access book is part of the LAMBDA Project (Learning, Applying, Multiplying Big Data Analytics), funded by the European Union, GA No. 809965. Data Analytics involves applying algorithmic processes to derive insights. Nowadays it is used in many industries to allow organizations and companies to make better decisions as well as to verify or disprove existing theories or models. The term data analytics is often used interchangeably with intelligence, statistics, reasoning, data mining, knowledge discovery, and others. The goal of this book is to introduce some of the definitions, methods, tools, frameworks, and solutions for big data processing, starting from the process of information extraction and knowledge representation, via knowledge processing and analytics to visualization, sense-making, and practical applications. Each chapter in this book addresses some pertinent aspect of the data processing chain, with a specific focus on understanding Enterprise Knowledge Graphs, Semantic Big Data Architectures, and Smart Data Analytics solutions. This book is addressed to graduate students from technical disciplines, to professional audiences following continuous education short courses, and to researchers from diverse areas following self-study courses. Basic skills in computer science, mathematics, and statistics are required.

bookdown Packt Publishing Ltd
Organize your Windows environment using Puppet tools to unload administrative burdens in a short time! About This Book Learn to install and implement a Puppet server for Windows administration Script Puppet manifests, functions, templates and facts for Windows A step-by-step guide that helps you to make your Windows environment more secure with Puppet Who This Book Is For This book is for Windows administrators who are looking for ways to automate management tasks of Windows servers and clients. Prior experience in Windows administration and a basic knowledge of Linux and Puppet will help you create wonders using this book. What You Will Learn Install Puppet on a Windows server and Foreman interface to have a user-friendly Puppet working environment Discover how to install Puppet agents to single or multiple computers and get your hosts connected to Puppetmaster in one shot Understand all about creating modules, writing manifests, managing files, services and, users in Puppet Learn how to install Puppet Forge modules to complete tasks such as registry management, ACL, and firewall. Explore the usage of Puppet facts, functions and modules to have a deeper understanding of how Puppet functions Manage installation and updates of third party software using Puppet with Chocolatey to completely forgo the manual update chores in your daily plan Use Puppet for Windows security to have a more secure environment In Detail Puppet is a configuration management tool. It allows you to automate all your IT configurations by giving you control of what you do to each "node" (Puppet agent), focusing also on when and how you do it. In context, Puppet is a cross-platform tool that is widely used for Unix-like and Microsoft Windows systems declaratively. However, it has been used more popularly for Unix-like systems. This book provides insights into using Puppet for Windows administration tasks such as server setup, application updates, and service management. This book kicks off with an introduction of the fundamentals of Puppet by helping you with the installation of Puppet on a Windows server and progresses with the introduction of the Foreman interface for managing Puppet nodes. Next, you deal with the installation of Puppet agents on multiple clients and how to connect them to your Puppet server by grouping your nodes for easy management. You then become familiarized with the scripting of Puppet manifests along with an understanding of the module structure in Puppet. You further move on to the installation of Puppet Forge Modules and their usage in Windows along with advanced topics such as facts, functions and templates. Moreover, you also venture into the security aspects for Windows by gaining insights into various security settings that will make your server and clients more secure from hackers using different attack vectors. You will also use Puppet and Chocolatey to install and update software. You finally round off by learning how to check the details of reporting and status monitoring along with the automation of installing and updating software for multiple Windows clients arming you with ample artillery to tame Puppet for your future projects. Style and approach This book uses a step-by-step and easy-to-learn approach that helps make your Windows environment manageable with Puppet. Each chapter is explained in detail and with many screenshots. Almost all the scenarios and examples are taken from real-world scenarios.

Data Pipelines Pocket Reference CRC Press
Helps you choose the right computational tools and techniques to meet your drug design goals Computational Drug Design covers all of the major computational drug design techniques in use today, focusing on the process that pharmaceutical chemists employ to design a new drug molecule. The discussions of which computational tools to use and when and how to use them are all based on typical pharmaceutical industry drug design processes. Following an introduction, the book is divided into three parts: Part One, The Drug Design Process, sets forth a variety of design processes suitable for a number of different drug development scenarios and drug targets. The author demonstrates how computational techniques are typically used during the design process, helping readers choose the best computational tools to meet their goals. Part Two, Computational Tools and Techniques, offers a series of chapters, each one dedicated to a single computational technique. Readers discover the strengths and weaknesses of each technique. Moreover, the book tabulates comparative accuracy studies, giving readers an unbiased comparison of all the available techniques. Part Three, Related Topics, addresses new, emerging, and complementary technologies, including bioinformatics, simulations at the cellular and organ level, synthesis route prediction, proteomics, and prodrug approaches. The book's accompanying CD-ROM, a special feature, offers graphics of the molecular structures and dynamic reactions discussed in the book as well as demos from computational drug design software companies. Computational Drug Design is ideal for both students and professionals in drug design, helping them choose and take full advantage of the best computational tools available. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

IBM DS8900F Architecture and Implementation "O'Reilly Media, Inc."

Management Information Systems provides comprehensive and integrative coverage of essential new technologies, information system applications, and their impact on business models and managerial decision-making in an exciting and interactive manner. The twelfth edition focuses on the major changes that have been made in information technology over the past two years, and includes new opening, closing, and Interactive Session cases.

IBM High-Performance Computing Insights with IBM Power System AC922 Clustered Solution Experts4solutions

This is an expert guide to the 2.6 Linux Kernel's most important component: the Virtual Memory Manager.

AWS Lambda in Action Martin Fitzpatrick

Class-tested and coherent, this textbook teaches classical and web information retrieval, including web search and the related areas of text classification and text clustering from basic concepts. It gives an up-to-date treatment of all aspects of the design and implementation of systems for gathering, indexing, and searching documents; methods for evaluating systems; and an introduction to the use of machine learning methods on text collections. All the important ideas are explained using examples and figures, making it perfect for introductory courses in information retrieval for advanced undergraduates and graduate students in computer science. Based on feedback from extensive classroom experience, the book has been carefully structured in order to make teaching more natural and effective. Slides and additional exercises (with solutions for lecturers) are also available through the book's supporting website to help course instructors prepare their lectures.

Guide to Competitive Programming IBM Redbooks

Data pipelines are the foundation for success in data analytics. Moving data from numerous diverse sources and transforming it to provide context is the difference between having data and actually gaining value from it. This pocket reference defines data pipelines and explains how they work in today's modern data stack. You'll learn common considerations and key decision points when implementing pipelines, such as batch versus streaming data ingestion and build versus buy. This book addresses the most common decisions made by data professionals and discusses foundational concepts that apply to open source frameworks, commercial products, and homegrown solutions. You'll learn: What a data pipeline is and how it works How data is moved and processed on modern data infrastructure, including cloud platforms Common tools and products used by data engineers to build pipelines How pipelines support analytics and reporting needs Considerations for pipeline maintenance, testing, and alerting