

Ubuntu Tutorials

This book contains a selection of papers accepted for presentation and discussion at ROBOT 2015: Second Iberian Robotics Conference, held in Lisbon, Portugal, November 19th-21th, 2015. ROBOT 2015 is part of a series of conferences that are a joint organization of SPR – “Sociedade Portuguesa de Robótica/ Portuguese Society for Robotics”, SEIDROB – Sociedad Española para la Investigación y Desarrollo de la Robótica/ Spanish Society for Research and Development in Robotics and CEA-GTRob – Grupo Temático de Robótica/ Robotics Thematic Group. The conference organization had also the collaboration of several universities and research institutes, including: University of Minho, University of Porto, University of Lisbon, Polytechnic Institute of Porto, University of Aveiro, University of Zaragoza, University of Malaga, LIACC, INESC-TEC and LARSyS. Robot 2015 was focussed on the Robotics scientific and technological activities in the Iberian Peninsula, although open to research and delegates from other countries. The conference featured 19 special sessions, plus a main/general robotics track. The special sessions were about: Agricultural Robotics and Field Automation; Autonomous Driving and Driver Assistance Systems; Communication Aware Robotics; Environmental Robotics; Social Robotics; Intelligent and Adaptable AAL Systems; Future Industrial Robotics Systems; Legged Locomotion Robots; Rehabilitation and Assistive Robotics; Robotic Applications in Art and Architecture; Surgical Robotics; Urban Robotics; Visual Perception for Autonomous Robots; Machine Learning in Robotics; Simulation and Competitions in Robotics; Educational Robotics; Visual Maps in Robotics; Control and Planning in Aerial Robotics, the XVI edition of the Workshop on Physical Agents and a Special Session on Technological Transfer and Innovation.

By exploring specific examples of cloud computing and virtualization, this book allows libraries considering cloud computing to start their exploration of these systems with a more informed perspective. The industry favorite Linux guide Linux Bible, 10th Edition is the ultimate hands-on Linux user guide, whether you're a true beginner or a more advanced user navigating recent changes. This updated tenth edition covers the latest versions of Red Hat Enterprise Linux (RHEL 8), Fedora 30, and Ubuntu 18.04 LTS. It includes information on cloud computing, with new guidance on containerization, Ansible automation, and Kubernetes and OpenShift. With a focus on RHEL 8, this new edition teaches techniques for managing storage, users, and security, while emphasizing simplified administrative techniques with Cockpit. Written by a Red Hat expert, this book provides the clear explanations and step-by-step instructions that demystify Linux and bring the new features seamlessly into your workflow. This useful guide assumes a base of little or no Linux knowledge, and takes you step by step through what you need to know to get the job done. Get Linux up and running quickly Master basic operations and tackle more advanced tasks Get up to date on the recent changes to Linux server system management Bring Linux to the cloud using Openstack and Cloudforms Simplified Linux administration through the Cockpit Web Interface Automated Linux Deployment with Ansible Learn to navigate Linux with Amazon (AWS), Google (GCE), and Microsofr Azure Cloud services Linux Bible, 10th Edition is the one resource you need, and provides the hands-on training that gets you on track in a flash.

Insightful projects to master deep learning and neural network architectures using Python and Keras Key FeaturesExplore deep learning across computer vision, natural language processing (NLP), and image processingDiscover best practices for the training of deep neural networks and their deploymentAccess popular deep learning models as well as widely used neural network architecturesBook Description Deep learning has been gradually revolutionizing every field of artificial intelligence, making application development easier. Python Deep Learning Projects imparts all the knowledge needed to implement complex deep learning projects in the field of computational linguistics and computer vision. Each of these projects is unique, helping you progressively master the subject. You'll learn how to implement a text classifier system using a recurrent neural network (RNN) model and optimize it to understand the shortcomings you might experience while implementing a simple deep learning system. Similarly, you'll discover how to develop various projects, including word vector representation, open domain question answering, and building chatbots using seq-to-seq models and language modeling. In addition to this, you'll cover advanced concepts, such as regularization, gradient clipping, gradient normalization, and bidirectional RNNs, through a series of engaging projects. By the end of this book, you will have gained knowledge to develop your own deep learning systems in a straightforward way and in an efficient way What you will learnSet up a deep learning development environment on Amazon Web Services (AWS)Apply GPU-powered instances as well as the deep learning AMImplement seq-to-seq networks for modeling natural language processing (NLP)Develop an end-to-end speech recognition systemBuild a system for pixel-wise semantic labeling of an imageCreate a system that generates images and their regionsWho this book is for Python Deep Learning Projects is for you if you want to get insights into deep learning, data science, and artificial intelligence. This book is also for those who want to break into deep learning and develop their own AI projects. It is assumed that you have sound knowledge of Python programming

Linux Tutorials - Herong's Tutorial Examples

Abg Series: Browsing Aja Di Internet

Ubuntu

Ubuntu 8.10 Linux Bible

Making Interactive Graphics with Processing's Python Mode

Server-side development with Node 10 made easy, 4th Edition

This book covers the Ubuntu 20.04 LTS (Focal Fossa) release, focusing on applications and administrative tools. The emphasis here is on what users will face when using Ubuntu, covering topics like installation, applications, software management for Snap and APT, the Ubuntu desktops (GNOME, MATE, and KDE), shell commands, network connections, and system administration tasks. There are four parts: Getting Started, Applications, Desktops, and Administration. Part 1 focuses on getting started, covering Ubuntu information and resources, using the Ubuntu Live DVD/USB drive, installing and setting up Ubuntu, upgrading Ubuntu, basic use of the desktop interface, and connecting to wired and wireless networks. Repositories and their use are covered in detail, along with the new Snap system for managing Snap packages. Ubuntu Snap package management with Ubuntu Software, the snap command, the Snap Store are examined, as well as APT package management with Gnome Software, the Synaptic Package Manager, and the apt and apt-get commands. Part 2 keys in on office, multimedia, mail, Internet, and social media applications. Part 3 covers the Ubuntu, Kubuntu, Ubuntu MATE, Xubuntu, and Lubuntu desktops. as well as the BASH shell. The Ubuntu desktop, which uses GNOME, is examined in detail. Part 4 deals with administration topics, first discussing system tools like the GNOME system monitor, the Disk Usage Analyzer, Seahorse, and Disk Utility. Then a detailed chapter on Ubuntu system administration tools is presented, covering tasks such as managing users and file systems, Bluetooth setup, network folder sharing, backups, and printing. The network connections chapter covers a variety of network tasks, including manual configuration of wired and wireless connections, and firewalls.

Explore the various packages in Julia that support image processing and build neural networks for video processing and object tracking. Key Features Build a full-fledged image processing application using JuliaImages Perform basic to advanced image and video stream processing with Julia's APIs Understand and optimize various features of OpenCV with easy examples Book Description Hands-On Computer Vision with Julia is a thorough guide for developers who want to get started with building computer vision applications using Julia. Julia is well suited to image processing because it's easy to use and lets you write easy-to-compile and efficient machine code. . This book begins by introducing you to Julia's image processing libraries such as Images.jl and ImageCore.jl. You'll get to grips with analyzing and transforming images using JuliaImages; some of the techniques discussed include enhancing and adjusting images. As you make your way through the chapters, you'll learn how to classify images, cluster them, and apply neural networks to solve computer vision problems. In the concluding chapters, you will explore OpenCV applications to perform real-time computer vision analysis, for example, face detection and object tracking. You will also understand Julia's interaction with Tesseract to perform optical character recognition and build an application that brings together all the techniques we introduced previously to consolidate the concepts learned. By end of the book, you will have understood how to utilize various Julia packages and a few open source libraries such as Tesseract and OpenCV to solve computer vision problems with ease. What you will learn Analyze image metadata and identify critical data using JuliaImages Apply filters and improve image quality and color schemes Extract 2D features for image comparison using JuliaFeatures Cluster and classify images with KNN/SVM machine learning algorithms Recognize text in an image using the Tesseract library Use OpenCV to recognize specific objects or faces in images and videos Build neural network and classify images with MXNet Who this book is for Hands-On Computer Vision with Julia is for Julia developers who are interested in learning how to perform image processing and want to explore the field of computer vision. Basic knowledge of Julia will help you understand the concepts more effectively.

A practical guide to understanding the latest features of the Rust programming language, useful libraries, and frameworks that will help you design and develop interesting projects Key FeaturesWork through projects that will help you build high-performance applications with RustDelve into concepts such as error handling, memory management, concurrency, generics, and macros with RustImprove business productivity by choosing the right libraries and frameworks for your applicationsBook Description Rust is a community-built language that solves pain points present in many other languages, thus improving performance and safety. In this book, you will explore the latest features of Rust by building robust applications across different domains and platforms. The book gets you up and running with high-quality open source libraries and frameworks available in the Rust ecosystem that can help you to develop efficient applications with Rust. You'll learn how to build projects in domains such as data access, RESTful web services, web applications, 2D games for web and desktop, interpreters and compilers, emulators, and Linux Kernel modules. For each of these application types, you'll use frameworks such as Actix, Tera, Yew, Quicksilver, ggez, and nom. This book will not only help you to build on your knowledge of Rust but also help you to choose an appropriate framework for building your project. By the end of this Rust book, you will have learned how to build fast and safe applications with Rust and have the real-world experience you need to advance in your career. What you will learnAccess TOML, JSON, and XML files and SQLite, PostgreSQL, and Redis databasesDevelop a RESTful web service using JSON payloadsCreate a web application using HTML templates and JavaScript and a frontend web application or web game using WebAssemblyBuild desktop 2D gamesDevelop an interpreter and a compiler for a programming languageCreate a machine language emulatorExtend the Linux Kernel with loadable modulesWho this book is for This Rust programming book is for developers who want to get hands-on experience with implementing their knowledge of Rust programming, and are looking for expert advice on which libraries and frameworks they can adopt to develop software that typically uses the Rust language.

This book is a collection of notes and sample codes written by the author while he was learning SOAP Web service. Topics include introduction of SOAP specifications; SOAP modules, features, and message structure; SOAP Message Exchange Patterns; Perl, PHP, and Java support of SOAP Web services; WS-Security, Username Token and X.509 Token; Signing and Encrypting SOAP messages; Using SoapUI for Web service testing. Updated in 2022 (Version v5.12) with minor updates. For latest updates and free sample chapters, visit <https://www.herongyang.com/Web-Services>.

Creative Projects for Rust Programmers

A Complete Introduction

A LITA Guide

Up and Running

Build exciting projects on domains such as web apps, WebAssembly, games, and parsing

The Complete Reference (Volume 3)

Processing opened up the world of programming to artists, designers, educators, and beginners. The Processing.py Python implementation of Processing reinterprets it for today's web. This short book gently introduces the core concepts of computer programming and working with Processing. Written by the co-founders of the Processing project, Reas and Fry, along with co-author Allison Parrish, Getting Started with Processing.py is your fast track to using Python's Processing mode.

This book covers the Ubuntu 19.04 (Disco Dingo) release, focusing on applications and administrative tools. The emphasis here is on what users will face when using Ubuntu, covering topics like installation, applications, software management, the Ubuntu desktops (GNOME, MATE, and KDE), shell commands, network connections, and system administration tasks. There are four parts: Getting Started, Applications, Desktops, and Administration. Part 1 focuses on getting started, covering Ubuntu information and resources, using Ubuntu Live DVD/USB discs, installing and setting up Ubuntu, upgrading Ubuntu, basic use of the desktop interface, and connecting to wired and wireless networks. Ubuntu Software and Synaptic Package manager, which provides easy and effective software management, are both discussed. Part 2 keys in on office, multimedia, mail, Internet, and social media applications. Part 3 covers the Ubuntu, Kubuntu, Ubuntu MATE, Xubuntu, and Lubuntu desktops. as well as the BASH shell. The Ubuntu desktop with the GNOME interface is examined in detail.. Part 4 deals with administration topics, first discussing system tools like the GNOME system monitor, the Disk Usage Analyzer, and Disk Utility. Then a detailed chapter on Ubuntu system administration tools is presented, covering tasks such as managing users and file systems, Bluetooth setup, network folder sharing, backups, and printing. The network connections chapter covers a variety of network tasks, including manual configuration of wired and wireless connections, and firewalls.

This book is a collection of notes and sample codes written by the author while he was learning Linux systems. Topics include using Cockpit Web portal for admin tasks; using network configuration and security firewall; managing users and groups; managing files and directories; managing NTFS, CIFS, EXT4, LBA, LVM file systems; installing CentOS systems; using SELinux (Security-Enhanced Linux) system; DNF/YUM software package manager; managing MySQL server; developing Python and PHP scripts; using GCC C/C++ compilers; managing vsftpd - Very Secure FTP daemon; managing Postfix and Dovecot servers for emails; managing directory service with OpenLDAP; running graphical applications on GNOME desktop and X11 servers; running Conda - Environment and Package Manager. Updated in 2022 (Version v5.40) with minor updates. For latest updates and free sample chapters, visit <https://www.herongyang.com/Linux>.

Get to grips with a new technology, understand what it is and what it can do for you, and then get to work with the most important features and tasks.This title is a step-by-step guide to installing and using Ubuntu easily and quickly.If you are interested in exploring what Ubuntu Linux has to offer, this is the book for you.Instant Ubuntu is written from the standpoint of a beginner. All you need to get started with this book is a very basic understanding of computing, such as the ability to burn a DVD and navigate the Internet.

Learn Web Development with Rails

Build intelligent robots that perform human tasks using AI techniques

Chemoinformatics and Bioinformatics in the Pharmaceutical Sciences

Robot 2015: Second Iberian Robotics Conference

An Introduction to AI concepts, algorithms, and their implementation

CompTIA A+ Core 1 (220-1001) and Core 2 (220-1002) Exam Cram

You've experienced the shiny, point-and-click surface of your Linux computer—now dive below and explore its depths with the power of the command line. The Linux Command Line takes you from your very first terminal keystrokes to writing full programs in Bash, the most popular Linux shell. Along the way you'll learn the timeless skills handed down by generations of gray-bearded, mouse-shunning gurus: file navigation, environment configuration, command chaining, pattern matching with regular expressions, and more. In addition to that practical knowledge, author William Shotts reveals the philosophy behind these tools and the rich heritage that your desktop Linux machine has inherited from Unix supercomputers of yore. As you make your way through the book's short, easily-digestible chapters, you'll learn how to: * Create and delete files, directories, and symlinks * Administer your system, including networking, package installation, and process management * Use standard input and output, redirection, and pipelines * Edit files with Vi, the world's most popular text editor * Write shell scripts to automate common or boring tasks * Slice and dice text files with cut, paste, grep, patch, and sed Once you overcome your initial "shell shock," you'll find that the command line is a natural and expressive way to communicate with your computer. Just don't be surprised if your mouse starts to gather dust. A featured resource in the Linux Foundation's "Evolution of a SysAdmin"

A comprehensive introduction to modern applied statistical genetic data analysis, accessible to those without a background in molecular biology or genetics. Human genetic research is now relevant beyond biology, epidemiology, and the medical sciences, with applications in such fields as psychology, psychiatry, statistics, demography, sociology, and economics. With advances in computing power, the availability of data, and new techniques, it is now possible to integrate large-scale molecular genetic information into research across a broad range of topics. This book offers the first comprehensive introduction to modern applied statistical genetic data analysis that covers theory, data preparation, and analysis of molecular genetic data, with hands-on computer exercises. It is accessible to students and researchers in any empirically oriented medical, biological, or social science discipline; a background in molecular biology or genetics is not required. The book first provides foundations for statistical genetic data analysis, including a survey of fundamental concepts, primers on statistics and human evolution, and an introduction to polygenic scores. It then covers the practicalities of working with genetic data, discussing such topics as analytical challenges and data management. Finally, the book presents applications and advanced topics, including polygenic score and gene-environment interaction applications, Mendelian Randomization and instrumental variables, and ethical issues. The software and data used in the book are freely available and can be found on the book's website.

This book is designed as an Ubuntu 21.04 Server administration and reference source, covering the Ubuntu servers and their support applications. Server tools are covered as well as the underlying configuration files and system implementations. The emphasis is on what administrators will need to know to perform key server support and management tasks. Coverage of the systemd service management system is integrated into the book. Topics covered include software management, systemd service management, AppArmor security, OpenSSH, the Chrony time server, and Ubuntu cloud services. Key servers are examined, including Web, FTP, CUPS printing, NFS, and Samba Windows shares. Network support servers and applications covered include the Squid proxy server, the Domain Name System (BIND) server, DHCP, distributed network file systems, IPtables firewalls, and cloud computing.

Create real-time applications using Node.js 10, Docker, MySQL, MongoDB, and Socket.IO with this practical guide and go beyond the developer's laptop to cover live deployment, including HTTPS and hardened security. Key Features Learn server-side JavaScript coding through the most up-to-date book on Node.js Explore the latest JavaScript features, and EcmaScript modules Walk through different stages of developing robust applications using Node.js 10 Book Description Node.js is a server-side JavaScript platform using an event-driven, non-blocking I/O model allowing users to build fast and scalable data-intensive applications running in real time. This book gives you an excellent starting point, bringing you straight to the heart of developing web applications with Node.js. You will progress from a rudimentary knowledge of JavaScript and server-side development to being able to create, maintain, deploy and test your own Node.js application.You will understand the importance of transitioning to functions that return Promise objects, and the difference between fs, fs/promises and fs-extra. With this book you'll learn how to use the HTTP Server and Client objects, data storage with both SQL and MongoDB databases, real-time applications with Socket.IO, mobile-first theming with Bootstrap, microservice deployment with Docker, authenticating against third-party services using OAuth, and use some well known tools to beef up security of Express 4.16 applications. What you will learn Install and use Node.js 10 for both development and deployment Use the Express 4.16 application framework Work with REST service development using the Restify framework Use data storage engines such as MySQL, SQLite3, and MongoDB Use User authentication methods with OAuth2 Perform Real-time communication with the front-end using Socket.IO Implement Docker microservices in development, testing and deployment Perform unit testing with Mocha 5.x, and functional testing with Puppeteer 1.1.x Work with HTTPS using Let's Encrypt, and application security with Helmet Who this book is for This book is for anybody looking for an alternative to the "P" languages (Perl, PHP, and Python), or anyone looking for a new paradigm of server-side application development. You should have at least a rudimentary understanding of JavaScript and web application development.

Getting Started with Processing.py

Ubuntu 20.04 LTS Desktop

From Novice to Professional

Ubuntu Linux Bible

An Introduction to Statistical Genetic Data Analysis

Hands-on Nuxt.js Web Development

The guide is an introductory guide to deploying piping applications on the Google Cloud Dataproc Application Programming Interface (API). The piping applications considered are those used for category counting, property summing and property averaging in a managed cluster environment in the cloud. This book is designed as an Ubuntu 20.04 LTS Server administration and reference source, covering the Ubuntu servers and their support applications. Server tools are covered as well as the underlying configuration files and system implementations. The emphasis is on what administrators will need to know to perform key server support and management tasks. Coverage of the systemd service management system is integrated into the book. Topics covered include software management, systemd service management, systemd-networkd and Netplan network configuration, AppArmor security, OpenSSH, the Chrony time server, and Ubuntu cloud services. Key servers are examined, including Web, FTP, CUPS printing, NFS, and Samba Windows shares. Network support servers and applications covered include the Squid proxy server, the Domain Name System (BIND) server, DHCP, distributed network file systems, IPtables firewalls, and cloud computing.

Bring life to your robot using ROS robotic applications About This Book This book will help you boost your knowledge of ROS and give you advanced practical experience you can apply to your ROS robot platforms This is the only book that offers you step-by-step instructions to solidify your ROS understanding and gain experience using ROS tools From eminent authors, this book offers you a plethora of fun-filled examples to make your own quadcopter, turtlebot, and two-armed robots Who This Book Is For If you are a robotics developer, whether a hobbyist, researcher or professional, and are interested in learning about ROS through a hands-on approach, then this book is for you. You are encouraged to have a working knowledge of GNU/Linux systems and Python. What You Will Learn Get to know the fundamentals of ROS and apply its concepts to real robot examples Control a mobile robot to navigate autonomously in an environment Model your robot designs using URDF and Xacro, and operate them in a ROS Gazebo simulation Control a 7 degree-of-freedom robot arm for visual servoing Fly a quadcopter to autonomous waypoints Gain working knowledge of ROS tools such as Gazebo, rviz, rqt, and Move-It Control robots with mobile devices and controller boards In Detail The visionaries who created ROS developed a framework for robotics centered on the commonality of robotic systems and exploited this commonality in ROS to expedite the development of future robotic systems. From the fundamental concepts to advanced practical experience, this book will provide you with an incremental knowledge of the ROS framework, the backbone of the robotics evolution. ROS standardizes many layers of robotics functionality from low-level device drivers to process control to message passing to software package management. This book provides step-by-step examples of mobile, armed, and flying robots, describing the ROS implementation as the basic model for other robots of these types. By controlling these robots, whether in simulation or in reality, you will use ROS to drive, move, and fly robots using ROS control. Style and approach This is an easy-to-follow guide with hands-on examples of ROS robots, both real and in simulation.

Beginning Ruby is a thoroughly contemporary guide to this powerful object-oriented language. It's one of the only guides aimed at both the novice programmer as well as experienced developers who are new to Ruby. The book starts by explaining the principles behind object oriented programming and within a few chapters builds towards creating a genuine Ruby application. The book then explains key Ruby principles, such as classes and objects; projects, modules and libraries; and other aspects of Ruby such as database access. In addition, Ruby on Rails is covered in some depth and the book's appendixes provide essential and long-lasting reference information.

Beginning Ruby

Perform powerful penetration testing using Kali Linux, Metasploit, Nessus, Nmap, and Wireshark

Hands-On Artificial Intelligence for Beginners

SOAP Web Service Tutorials - Herong's Tutorial Examples

9 projects demystifying neural network and deep learning models for building intelligent systems

The IoT Framework for Mechanical Engineers

The best reference for Ubuntu Linux Ubuntu Linux is a popular, powerful, and versatile operating system. Now you can get the most out of everything Ubuntu Linux has to offer with the Ubuntu Linux Bible. This complete and comprehensive guide introduces you to Ubuntu and shows you how to use it to its fullest, whether you're a typical desktop user or a system administrator. You'll learn to do everything from reading email to configuring wireless networks. You'll reap huge rewards from this book, regardless of how much prior experience you have with Ubuntu. Get started with Ubuntu Linux and see what's in the newest version (20.04) Learn how to read emails, surf the web, and create and publish documents Take on system administration tasks, like creating and managing users and adding new disks to the system Discover how to use Ubuntu Linux in an enterprise or personal environment Figure out how to set up Ubuntu Linux servers for the web, email, shared printing, and more Find out why Ubuntu Linux is the most popular Linux operating system in the world

Grasp the fundamentals of Artificial Intelligence and build your own intelligent systems with ease Key FeaturesEnter the world of AI with the help of solid concepts and real-world use casesExplore AI components to build real-world automated intelligenceBecome well versed with machine learning and deep learning conceptsBook Description Virtual Assistants, such as Alexa and Siri, process our requests, Google's cars have started to read addresses, and Amazon's prices and Netflix's recommended videos are decided by AI. Artificial Intelligence is one of the most exciting technologies and is becoming increasingly significant in the modern world. Hands-On Artificial Intelligence for Beginners will teach you what Artificial Intelligence is and how to design and build intelligent applications. This book will teach you to harness packages such as TensorFlow in order to create powerful AI systems. You will begin with reviewing the recent changes in AI and learning how artificial neural networks (ANNs) have enabled more intelligent AI. You'll explore feedforward, recurrent, convolutional, and generative neural networks (FFNNs, RNNs, CNNs, and GNNs), as well as reinforcement learning methods. In the concluding chapters, you'll learn how to implement these methods for a variety of tasks, such as generating text for chatbots, and playing board and video games. By the end of this book, you will be able to understand exactly what you need to consider when optimizing ANNs and how to deploy and maintain AI applications. What you will learnUse TensorFlow packages to create AI systemsBuild feedforward, convolutional, and recurrent neural networksImplement generative models for text generationBuild reinforcement learning algorithms to play gamesAssemble RNNs, CNNs, and decoders to create an intelligent assistantUtilize RNNs to predict stock market behaviorCreate and scale training pipelines and deployment architectures for AI systemsWho this book is for This book is designed for beginners in AI, aspiring AI developers, as well as machine learning enthusiasts with an interest in leveraging various algorithms to build powerful AI applications.

Learn Nuxt.js for building server-side rendered, static-generated, and production-ready Vue.js web applications with the help of practical examples Key FeaturesExplore techniques for authentication, testing, and deployment to build your first complete Nuxt.js web appWrite cleaner, maintainable, and scalable isomorphic JavaScript web applicationsTransform your Vue.js application into universal and static-generated web appsBook Description Nuxt.js is a progressive web framework built on top of Vue.js for server-side rendering (SSR). With Nuxt.js and Vue.js, building universal and static-generated applications from scratch is now easier than ever before. This book starts with an introduction to Nuxt.js and its constituents as a universal SSR framework. You'll learn the fundamentals of Nuxt.js and find out how you can integrate it with the latest version of Vue.js. You'll then explore the Nuxt.js directory structure and set up your first Nuxt.js project using pages, views, routing, and Vue components. With the help of practical examples, you'll learn how to connect your Nuxt.js application with the backend API by exploring your Nuxt.js application's configuration, plugins, modules, middleware, and the Vuex store. The book shows you how you can turn your Nuxt.js application into a universal or static-generated application by working with REST and GraphQL APIs over HTTP requests. Finally, you'll get to grips with security techniques using authorization, package your Nuxt.js application for testing, and deploy it to production. By the end of this web development book, you'll have developed a solid understanding of using Nuxt.js for your projects and be able to build secure, end-to-end tested, and scalable web applications with SSR, data handling, and SEO capabilities. What you will learnIntegrate Nuxt.js with the latest version of Vue.jsExtend your Vue.js applications using Nuxt.js pages, components, routing, middleware, plugins, and modulesCreate a basic real-time web application using Nuxt.js, Node.js, Koa.js and RethinkDBDevelop universal and static-generated web applications with Nuxt.js, headless CMS and GraphQLBuild Node.js and PHP APIs from scratch with Koa.js, PSRs, GraphQL, MongoDB and MySQLSecure your Nuxt.js applications with the JWT authenticationDiscover best practices for testing and deploying your Nuxt.js applicationsWho this book is for The book is for any JavaScript or full-stack developer who wants to build server-side rendered Vue.js apps. A basic understanding of the Vue.js framework will assist with understanding key concepts covered in the book. Bring a new degree of interconnectivity to your world by building your own intelligent robots Key Features Leverage fundamentals of AI and robotics Work through use cases to implement various machine learning algorithms Explore Natural Language Processing (NLP) concepts for efficient decision making in robots Book Description Artificial Intelligence for Robotics starts with an introduction to Robot Operating Systems (ROS), Python, robotic fundamentals, and the software and tools that are required to start out with robotics. You will learn robotics concepts that will be useful for making decisions, along with basic navigation skills. As you make your way through the chapters, you will learn about object recognition and genetic algorithms, which will teach your robot to identify and pick up an irregular object. With plenty of use cases throughout, you will explore natural language processing (NLP) and machine learning techniques to further enhance your robot. In the concluding chapters, you will learn about path planning and goal-oriented programming, which will help your robot prioritize tasks. By the end of this book, you will have learned to give your robot an artificial personality using simulated intelligence. What you will learn Get started with robotics and artificial intelligence Apply simulation techniques to give your robot an artificial personality Understand object recognition using neural networks and supervised learning techniques Pick up objects using genetic algorithms for manipulation Teach your robot to listen using NLP via an expert system Use machine learning and computer vision to teach your robot how to avoid obstacles Understand path planning, decision trees, and search algorithms in order to enhance your robot Who this book is for If you have basic knowledge about robotics and want to build or enhance your existing robot's intelligence, then Artificial Intelligence for Robotics is for you. This book is also for enthusiasts who want to gain knowledge of AI and robotics.

ROS Robotics By Example

Official Ubuntu Book

The Linux Command Line

Hands-On Computer Vision with Julia

Ubuntu 20.04 LTS Server

Ruby on Rails Tutorial

Building on the successful first and second volumes, this book is the third volume of the Springer book on the Robot Operating System (ROS): The Complete Reference. The Robot Operating System is evolving from year to year with a wealth of new contributed packages and enhanced capabilities. Further, the ROS is being integrated into various robots and systems and is becoming an embedded technology in emerging robotics platforms. The objective of this third volume is to provide readers with additional and comprehensive coverage of the ROS and an overview of the latest achievements, trends and packages developed with and for it. Combining tutorials, case studies, and research papers, the book consists of sixteen chapters and is divided into five parts. Part 1 presents multi-robot systems with the ROS. In Part 2, four chapters deal with the development of unmanned aerial systems and their applications. In turn, Part 3 highlights recent work related to navigation, motion planning and control. Part 4 discusses recently contributed ROS packages for security, ROS2, GPU usage, and real-time processing. Lastly, Part 5 deals with new interfaces allowing users to interact with robots. Taken together, the three volumes of this book offer a valuable reference guide for ROS users, researchers, learners and developers alike. Its breadth of coverage makes it a unique resource.

This book covers the Ubuntu 18.04 LTS (Bionic Beaver) release, focusing on applications and administrative tools. The emphasis here is on what users will face when using Ubuntu, covering topics like installation, applications, software management, the Ubuntu desktops (GNOME and KDE), shell commands, network connections, and system administration tasks. There are four parts: Getting Started, Applications, Desktops, and Administration. Part 1 focuses on getting started, covering Ubuntu information and resources, using Ubuntu Live DVD/USB discs, installing and setting up Ubuntu, upgrading Ubuntu, basic use of the desktop interface, and connecting to wired and wireless networks. Ubuntu Software and Synaptic Package manager, which provides easy and effective software management, are both discussed. Part 2 keys in on office, multimedia, mail, Internet, and social media applications. Part 3 covers the Ubuntu, Kubuntu, Ubuntu MATE, Ubuntu Cinnamon, Xubuntu, and Lubuntu desktops. as well as the BASH shell. The Ubuntu desktop with the GNOME interface is examined in detail. Ubuntu GNOME uses a Dock and a Dash (dashboard) to manage access to applications and devices. Part 4 deals with administration topics, first discussing system tools like the GNOME system monitor, the Disk Usage Analyzer, and Disk Utility (Udisks). Then a detailed chapter on Ubuntu system administration tools is presented, covering tasks such as managing users and file systems, Bluetooth setup, network folder sharing, backups, and printing. The network connections chapter covers a variety of network tasks, including manual configuration of wired and wireless connections, and firewalls (the Gufw and FirewallD).

Using a step-by-step, highly visual approach, Andrews/Dark Shelton/Pierce's bestselling COMPITIA A+ GUIDE TO IT TECHNICAL SUPPORT, 11th edition, teaches you how to work with users as well as install, maintain, troubleshoot and network computer hardware and software. Ensuring you are well prepared for 220-1101 and 220-1102 certification exams, each module covers core and advanced topics while emphasizing practical application of the most current technology, techniques and industry standards. You will study the latest hardware, security, Active Directory, operational procedures, basics of scripting, virtualization, cloud computing, mobile devices, Windows 10, macOS and Linux. The text provides thorough preparation for the certification exam -- and your future success as an IT support technician or administrator. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This book provides knowledge, skills, and strategies an engineer requires to effectively integrate Internet of Things (IoT) into the field of mechanical engineering. Divided into three sections named IoT Strategies, IoT Foundation topics, and IoT system development, the volume covers introduction to IoT framework, its components, advantages, challenges, and practical process for effective implementation of IoT from mechanical engineering perspective. Further, it explains IoT systems and hands-on training modules, implementation, and execution of IoT Systems. Features: Presents exclusive material on application of IoT in mechanical engineering. Combines theory and practice including relevant terminologies and hands-on. Emphasis on use of IoT to streamline operations, reduce costs, and increased profits. Focuses on development and implementation of Raspberry Pi and Arduino based IoT systems. Illustrates use IoT data to improve performance of robots, machines, and systems. This book aims at Researchers, Graduate students in Mechanical Engineering, Computer Programming, Automobile, Robotics, and Industry 4.0/automation.

Advances in Robotics, Volume 1

Audio Visualization Using ThMAD

Administration and Reference

Node.js Web Development

Python Deep Learning Projects

Stats Cosmos Piping Applications Google Cloud Dataproc Deployment Guide

This educational book introduces emerging developers to computer programming through the Python software development language, and serves as a reference book for experienced developers looking to learn a new language or re-familiarize themselves with computational logic and syntax.

Chemoinformatics and Bioinformatics in the Pharmaceutical Sciences brings together two very important fields in pharmaceutical sciences that have been mostly seen as diverging from each other: chemoinformatics and bioinformatics. As developing drugs is an expensive and lengthy process, technology can improve the cost, efficiency and speed at which new drugs can be discovered and tested. This book presents some of the growing advancements of technology in the field of drug development and how the computational approaches explained here can reduce the financial and experimental burden of the drug discovery process. This book will be useful to pharmaceutical science researchers and students who need basic knowledge of computational techniques relevant to their projects. Bioscientists, bioinformaticians, computational scientists, and other stakeholders from industry and academia will also find this book helpful. Provides practical information on how to choose and use appropriate computational tools Presents the wide, intersecting fields of chemo-bio-informatics in an easily-accessible format Explores the fundamentals of the emerging field of chemoinformatics and bioinformatics

Everything you need to know—and then some! It's the fastest-growing, coolest Linux distribution out there, and now you can join the excitement with this information-packed guide. Want to edit graphics? Create a spreadsheet? Manage groups? Set up an NFS server? You'll learn it all and more with the expert guidance, tips, and techniques in this first-ever soup-to-nuts book on Ubuntu. From the basics for newcomers to enterprise management for system administrators, it's what you need to succeed with Ubuntu. Master the fundamentals for desktop and networks Send e-mail, share files, edit text, and print Download music, watch DVDs, and play games Use Ubuntu on laptops, go wireless, or sync it with your PDA Set up Web, mail, print, DNS, DHCP, and other servers Manage groups and secure your network What's on the CD-ROM? Test-drive Ubuntu on your computer without changing a thing using the bootable Ubuntu Desktop Live CD included with this book. If you decide to install it permanently, a simple, easy-to-use installer is provided. Also on the CD, you'll find: Popular open-source software for Microsoft(r) Windows(r), such as AbiWord, Firefox(r), GIMP, and more An easy-to-use application that simplifies installing these programs on your Microsoft Windows system System Requirements: Please see the "About the CD-ROM Appendix" for details and complete system requirements. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

"Ruby on Rails™ Tutorial by Michael Hartl has become a must-read for developers learning how to build Rails apps." —Peter Cooper, Editor of Ruby Inside Used by sites as diverse as Twitter, GitHub, Disney, and the Yellow Pages, Ruby on Rails is one of the most popular frameworks for developing web applications, but it can be challenging to learn and use. Whether you're new to web development or new only to Rails, Ruby on Rails™ Tutorial, Third Edition, is the solution. Best-selling author and leading Rails developer Michael Hartl teaches Rails by guiding you through the development of three example applications of increasing sophistication, focusing on the fundamental techniques in web development needed for virtually any kind of application. The updates to this edition include simplified installation via a standard development environment in the cloud, use of the default Rails stack throughout, a light-weight testing approach, an all-new section on image upload, and an all-new chapter on account activation and password resets, including sending email with Rails. This indispensable guide provides integrated tutorials not only for Rails, but also for the essential Ruby, HTML, CSS, and SQL skills you'll need when developing web applications. Hartl explains how each new technique solves a real-world problem, and then he demonstrates it with bite-sized code that's simple enough to understand, yet novel enough to be useful. Whatever your previous web development experience, this book will guide you to true Rails mastery. This book will help you install and set up your Rails development environment, including a pre-installed integrated development environment (IDE) in the cloud Go beyond generated code to truly understand how to build Rails applications from scratch Learn testing and test-driven development (TDD) Effectively use the Model-View-Controller (MVC) pattern Structure applications using the REST architecture Build static pages and transform them into dynamic ones Master the Ruby programming skills all Rails developers need Create high-quality site layouts and data models Implement registration and authentication systems, including validation and secure passwords Update, display, and delete users Upload images in production using a cloud storage service Implement account activation and password reset, including sending email with Rails Add social features and microblogging, including an introduction to Ajax Record version changes with Git and create a secure remote repository at Bitbucket Deploy your applications early and often with Heroku

Cloud-Based Services for Your Library

Ubuntu 16.04 LTS Desktop: Applications and Administration

COMPITIA A+ Guide to Information Technology Technical Support

Ubuntu 18.04 LTS Desktop: Applications and Administration

Ubuntu 21.04 Server

Linux Bible

Learn how to use Thinking Machine Audio Dreams (ThMAD), a realtime audio visualization engine for Ubuntu Linux. This book bridges the gap between programmers and artists. Both artists and developers with an inclination towards arts will profit from this book since it is a combination of a hands-on tutorial, manual, and reference, with many illustrations that accompany the explanations and tutorials. You'll learn the basics of ThMAD's open source software suite and then start experimenting and building your own rendering pipelines to create audio visualizations. You'll see how to soundly use all ThMAD's GUI functionalities, and all modules are provided in a way that will serve both intellectual curiosity and professional needs. The examples that are used as part of the software, and the tutorials included in the book, will serve as a solid basis for your own experiments. What You'll Learn Use the ThMAD software, all GUI functionalities, and all modules Develop your own audio visualization projects Explore the program operations for ThMAD Artiste and ThMAD Player, including all possible options for controlling program operations. Who This Book Is For Visual artists with some IT background, or developers with artistic inclinations. Development experience is not required, but surely helpful.

A guide to Ubuntu covers such topics as installation, configuration, the filesystem, the command line, system maintenance and security, networking, using OpenOffice.org, Web browsing, and playing games.

This is the eBook version of the print title. The eBook edition does not provide access to the test engine and practice test that accompanies the print book. This is the perfect study guide to help you pass CompTIA's new A+® Core 1 (220-1101) and Core 2 (220-1102) exams. It provides coverage and practice questions for every exam topic, including substantial new coverage of Windows 10, as well as new PC hardware, tablets, smartphones, macOS, Linux, cloud computing, and professional-level networking and security. Extensive prep topics include quizzes, Exam Alerts, our great last-minute Cram Sheet, two full practice exams in the print book and an additional two exams in the test engine, plus complete real-time practice and feedback through Pearson's state-of-the-art test engine. You'll also find 14 exclusive Real-World Scenario case studies, all linked to simulations or video on our bonus content site. Covers the critical information you'll need to know to score higher on your A+ Core 1 (220-1101) and Core 2 (220-1102) exams! --Deploy and manage computers running Windows 10/8/7, macOS, Linux, iOS, and Android --Master and practice the six-step A+ troubleshooting process --Understand, install, configure, and troubleshoot motherboards, CPUs, and memory --Test and troubleshoot power-related problems --Use all forms of storage, including SSDs, optical devices, and RAID systems --Work effectively with mobile devices, including laptops, tablets, and smartphones --Configure Windows components and applications, use Windows administrative tools, and optimize Windows systems --Repair damaged Windows environments and troubleshoot Windows issues --Install and manage printers and other peripherals --Understand and build with networks, network hardware, wireless protocols, and cloud technologies --Install and configure SOHO wired/wireless networks, and troubleshoot connectivity --Secure desktops and mobile devices, implement authentication methods, prevent malware attacks, and protect data

Explore the latest ethical hacking tools and techniques in Kali Linux 2019 to perform penetration testing from scratch Key FeaturesGet up and running with Kali Linux 2019.2Gain comprehensive insights into security concepts such as social engineering, wireless network exploitation, and web application attacksLearn to use Linux commands in the way ethical hackers do to gain control of your environmentBook Description The current rise in hacking and security breaches makes it more important than ever to effectively pentest your environment, ensuring endpoint protection. This book will take you through the latest version of Kali Linux and help you use various tools and techniques to efficiently deal with crucial security aspects. Through real-world examples, you'll understand how to set up a lab and later explore core penetration testing concepts. Throughout the course of this book, you'll get up to speed with gathering sensitive information and even discover different vulnerability assessment tools bundled in Kali Linux 2019. In later chapters, you'll gain insights into concepts such as social engineering, attacking wireless networks, exploitation of web applications and remote access connections to further build on your pentesting skills. You'll also focus on techniques such as bypassing controls, attacking the end user and maintaining persistence access through social media. Finally, this pentesting book covers best practices for performing complex penetration testing techniques in a highly secured environment. By the end of this book, you'll be able to use Kali Linux to detect vulnerabilities and secure your system by applying penetration testing techniques of varying complexity. What you will learnExplore the fundamentals of ethical hackingLearn how to install and configure Kali LinuxGet up to speed with performing wireless network pentestingGain insights into passive and active information gatheringUnderstand web application pentesting Decode WEP, WPA, and WPA2 encryptions using a variety of methods, such as the fake authentication attack, the ARP request replay attack, and the dictionary attackWho this book is for If you are an IT security professional or a security consultant who wants to get started with penetration testing using Kali Linux 2019.2, then this book is for you. The book will also help if you're simply looking to learn more about ethical hacking and various security breaches. Although prior knowledge of Kali Linux is not necessary, some understanding of cybersecurity will be useful.

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