Python And Aws Cookbook

Thank you entirely much for downloading **Python And Aws Cookbook** .Maybe you have knowledge that, people have look numerous time for their favorite books later than this Python And Aws Cookbook , but end taking place in harmful downloads.

Rather than enjoying a good PDF once a mug of coffee in the afternoon, on the other hand they juggled following some harmful virus inside their computer. **Python And Aws Cookbook** is friendly in our digital library an online permission to it is set as public appropriately you can download it instantly. Our digital library saves in combination countries, allowing you to get the most less latency times to download any of our books next this one. Merely said, the Python And Aws Cookbook is universally compatible similar to any devices to read.

Python Cookbook - David Beazley 2013-05-10
If you need help writing programs in Python 3, or want to update older Python 2 code, this book is just the ticket. Packed with practical recipes written and tested with Python 3.3, this unique cookbook is for experienced Python programmers who want to focus on modern tools and idioms. Inside, you'll find complete recipes for more than a dozen topics, covering the core Python language as well as tasks common to a wide variety of application domains. Each recipe contains code samples you can use in your projects right away, along with a discussion about how and why the solution works. Topics include: Data Structures and Algorithms Strings and Text Numbers, Dates, and Times Iterators and Generators Files and I/O Data Encoding and Processing Functions Classes and Objects Metaprogramming Modules and Packages Network and Web Programming Concurrency Utility Scripting and System Administration Testing, Debugging, and Exceptions C Extensions

Mastering Python Networking - Eric Chou 2020-01-30
New edition of the bestselling guide to mastering Python Networking, updated to Python 3 and including the latest on network data analysis, Cloud Networking, Ansible 2.8, and new libraries Key FeaturesExplore the power of Python libraries to tackle difficult network problems efficiently and effectively, including pyATS, Nornir, and Ansible 2.8Use Python and Ansible for DevOps, network device automation, DevOps, and software-defined networkingBecome an expert in implementing advanced network-related tasks with Python 3Book Description Networks in your infrastructure set the foundation for how your application can be deployed, maintained, and serviced. Python is the ideal language for network engineers to explore tools that were previously available to systems engineers and application developers. In Mastering Python Networking, Third edition, you'll embark on a Python-based journey to transition from traditional network engineers to network developers ready for the next-generation of networks. This new edition is completely revised and updated to work with Python 3. In addition to new chapters on network data analysis with ELK stack (Elasticsearch, Logstash, Kibana, and Beats) and Azure Cloud Networking, it includes updates on using newer libraries such as pyATS and Nornir, as well as Ansible 2.8. Each chapter is updated with the latest libraries with working examples to ensure compatibility and understanding of the concepts. Starting with a basic overview of Python, the book teaches you how it can interact with both legacy and API-enabled network devices. You will learn to leverage high-level Python packages and frameworks to perform network automation tasks, monitoring, management, and enhanced network security followed by Azure and AWS Cloud networking. Finally, you will use Jenkins for continuous integration as well as testing tools to verify your network. What you will learnUse Python libraries to interact with your networkIntegrate Ansible 2.8 using Python to control Cisco, Juniper, and Arista network devicesLeverage existing Flask web frameworks to construct high-level APIsLearn how to build virtual networks in the AWS & Azure CloudLearn how to use Elastic Stack for network data analysisUnderstand how Jenkins can be used to automatically deploy changes in your networkUse PyTest and Unittest for Test-Driven Network Development in networking engineering with PythonWho this book is for Mastering Python Networking, Third edition is for network engineers, developers, and SREs who want to use Python for network automation, programmability, and data analysis. Basic familiarity with Python programming and networking-related concepts such as Transmission Control Protocol/Internet Protocol (TCP/IP) will be useful.

Amazon S3 Cookbook - Naoya Hashimoto 2015-08-27
Over 30 hands-on recipes that will get you up and running with Amazon Simple Storage Service (S3) efficiently About This Book Learn how to store, manage, and access your data with AWS SDKs Study the Amazon S3 pricing model and learn how to calculate costs by simulating practical scenarios Optimize your Amazon S3 bucket by following step-by-step instructions of how to deliver your content with CloudFront, secure the S3 bucket with IAM, and lower costs with object life cycle management Who This Book Is For This book is for cloud developers who have experience of using Amazon S3 and are also familiar with Amazon S3. What You Will Learn Host a static website on Amazon S3 Calculate costs with AWS Simple Monthly Calculators Deploy a static website via CloudFormation Distribute your content via CloudFront Secure resources with bucket policies and IAM Protect objects using server-side and client-side encryption Enable Cross-Origin Resource Sharing Manage objects' life cycles to lower costs Optimize performance for uploading as well as downloading objects Enable S3 event notifications and create Lambda functions Manage common operations with AWS SDKs In Detail Amazon S3 is one of the most famous and trailblazing cloud object storage services, which is highly scalable, low-latency, and economical. Users only pay for what they use and can store and retrieve any amount of data at any time over the Internet, which attracts Hadoop users who run clusters on EC2. The book starts by showing you how to install several AWS SDKs such as iOS, Java, Node.js, PHP, Python, and Ruby and shows you how to manage objects. Then, you'll be taught how to use the installed AWS SDKs to develop applications with Amazon S3. Furthermore, you will explore the Amazon S3 pricing model and will learn how to annotate S3 billing with cost allocation tagging. In addition to this, the book covers several practical recipes about how to distribute your content with CloudFront, secure your content with IAM, optimize Amazon S3 performance, and notify S3 events with Lambada. By the end of this book, you will be successfully implementing pro-level practices, techniques, and solutions in Amazon S3. Style and approach A step-by-step practical guide that will show you how to efficiently store, manage, and control your data in Amazon S3.

AWS Administration Cookbook - Lucas Chan 2017-04-24
Build, automate, and manage your AWS-based cloud environments About This Book Install, configure, and administer computing, storage, and networking in the AWS cloud Automate your infrastructure and control every aspect of it through infrastructure as code Work through exciting recipes to administer your AWS cloud Who This Book Is For If you are an administrator, DevOps engineer, or an IT professional who is moving to an AWS-based cloud environment, then this book is for you. It assumes familiarity with cloud computing platforms, and that you have some understanding of virtualization, networking, and other administration-related tasks. What You Will Learn Discover the best practices to achieve an automated repeatable infrastructure in AWS Bring down your IT costs by managing AWS successfully and deliver high availability, fault tolerance, and scalability Make any website faster with static and dynamic caching Create monitoring and alerting dashboards using CloudWatch Migrate a database to AWS Set up consolidated billing to achieve simple and effective cost management with accounts Host a domain and find out how you can automate health checks In Detail Amazon Web Services (AWS) is a bundled remote computing service that provides cloud computing infrastructure over the Internet with storage, bandwidth, and customized support for application programming interfaces (API). Implementing these services to efficiently administer

your cloud environments is a core task. This book will help you build and administer your cloud environment with AWS. We'll begin with the AWS fundamentals, and you'll build the foundation for the recipes you'll work on throughout the book. Next, you will find out how to manage multiple accounts and set up consolidated billing. You will then learn to set up reliable and fast hosting for static websites, share data between running instances, and back up your data for compliance. Moving on, you will find out how to use the compute service to enable consistent and fast instance provisioning, and will see how to provision storage volumes and autoscale an application server. Next, you'll discover how to effectively use the networking and database service of AWS. You will also learn about the different management tools of AWS along with securing your AWS cloud. Finally, you will learn to estimate the costs for your cloud. By the end of the book, you will be able to easily administer your AWS cloud. Style and approach This practical guide is packed with clear, practical, instruction-based recipes that will enable you to use and implement the latest features of AWS.

Google Cloud Cookbook - Rui Costa 2021-10-08
Get quick hands-on experience with Google Cloud. This cookbook provides a variety of self-contained recipes that show you how to use Google Cloud services for your enterprise application. Whether you're looking for practical ways to apply microservices, AI, analytics, security, or networking solutions, these recipes take you step-by-step through the process and provide discussions that explain how and why the recipes work. Ideal for system engineers and administrators, developers, network and database administrators, and data analysts, this cookbook helps you get started with Google Cloud regardless of your level of experience. Google veterans Rui Costa and Drew Hodun also cover advanced-level Google Cloud services for those who have appreciable experience with the platform. Learn how to get started with Google Cloud Understand the depth of services Google Cloud provides Gain hands-on experience using practical examples and labs Explore topics that include BigQuery, Cloud Run, and Kubernetes Build and run mobile and web applications on Google Cloud Examine ways to build your cloud applications for scale Build a minimum viable product (MVP) app to use in production Learn data platform and pipeline skills

Python Cookbook - Alex Martelli 2005-03-18
Portable, powerful, and a breeze to use, Python is the popular open source object-oriented programming language used for both standalone programs and scripting applications. It is now being used by an increasing number of major organizations, including NASA and Google.Updated for Python 2.4, The Python Cookbook, 2nd Edition offers a wealth of useful code for all Python programmers, not just advanced practitioners. Like its predecessor, the new edition provides solutions to problems that Python programmers face everyday.It now includes over 200 recipes that range from simple tasks, such as working with dictionaries and list comprehensions, to complex tasks, such as monitoring a network and building a templating system. This revised version also includes new chapters on topics such as time, money, and metaprogramming.Here's a list of additional topics covered: Manipulating text Searching and sorting Working with files and the filesystem Object-oriented programming Dealing with threads and processes System administration Interacting with databases Creating user interfaces Network and web programming Processing XML Distributed programming Debugging and testing Another advantage of The Python Cookbook, 2nd Edition is its trio of authors--three well-known Python programming experts, who are highly visible on email lists and in newsgroups, and speak often at Python conferences.With scores of practical examples and pertinent background information, The Python Cookbook, 2nd Edition is the one source you need if you're looking to build efficient, flexible, scalable, and well-integrated systems.

Cloud Native Security Cookbook - Josh Armitage 2022-04-21
With the rise of the cloud, every aspect of IT has been shaken to its core. The fundamentals for building systems are changing, and although many of the principles that underpin security still ring true, their implementation has become unrecognizable. This practical book provides recipes for AWS, Azure, and GCP to help you enhance the security of your own cloud native systems. Based on his hard-earned experience working with some of the world's biggest enterprises and rapidly iterating startups, consultant Josh Armitage covers the trade-offs that security professionals, developers, and infrastructure gurus need to make when working with different cloud providers. Each recipe discusses these inherent compromises, as well as where clouds have similarities and where they're fundamentally different. Learn how the cloud

provides security superior to what was achievable in an on-premises world Understand the principles and mental models that enable you to make optimal trade-offs as part of your solution Learn how to implement existing solutions that are robust and secure, and devise design solutions to new and interesting problems Deal with security challenges and solutions both horizontally and vertically within your business

Hands-On Enterprise Automation with Python - Bassem Aly 2018-06-28
Invent your own Python scripts to automate your infrastructure Key Features Make the most of Python libraries and modules to automate your infrastructure Leverage Python programming to automate server configurations and administration tasks Efficiently develop your Python skill set Book Description Hands-On Enterprise Automation with Python starts by covering the set up of a Python environment to perform automation tasks, as well as the modules, libraries, and tools you will be using. We'll explore examples of network automation tasks using simple Python programs and Ansible. Next, we will walk you through automating administration tasks with Python Fabric, where you will learn to perform server configuration and administration, along with system administration tasks such as user management, database management, and process management. As you progress through this book, you'll automate several testing services with Python scripts and perform automation tasks on virtual machines and cloud infrastructure with Python. In the concluding chapters, you will cover Python-based offensive security tools and learn how to automate your security tasks. By the end of this book, you will have mastered the skills of automating several system administration tasks with Python. What you will learn Understand common automation modules used in Python Develop Python scripts to manage network devices Automate common Linux administration tasks with Ansible and Fabric Managing Linux processes Administrate VMware, OpenStack, and AWS instances with Python Security automation and sharing code on GitHub Who this book is for Hands-On Enterprise Automation with Python is for system administrators and DevOps engineers who are looking for an alternative to major automation frameworks such as Puppet and Chef. Basic programming knowledge with Python and Linux shell scripting is necessary.

Natural Language Processing with AWS AI Services - Mona M 2021-11-26
Work through interesting real-life business use cases to uncover valuable insights from unstructured text using AWS AI services Key FeaturesGet to grips with AWS AI services for NLP and find out how to use them to gain strategic insightsRun Python code to use Amazon Textract and Amazon Comprehend to accelerate business outcomesUnderstand how you can integrate human-in-the-loop for custom NLP use cases with Amazon A2IBook Description Natural language processing (NLP) uses machine learning to extract information from unstructured data. This book will help you to move quickly from business questions to high-performance models in production. To start with, you'll understand the importance of NLP in today's business applications and learn the features of Amazon Comprehend and Amazon Textract to build NLP models using Python and Jupyter Notebooks. The book then shows you how to integrate AI in applications for accelerating business outcomes with just a few lines of code. Throughout the book, you'll cover use cases such as smart text search, setting up compliance and controls when processing confidential documents, real-time text analytics, and much more to understand various NLP scenarios. You'll deploy and monitor scalable NLP models in production for real-time and batch requirements. As you advance, you'll explore strategies for including humans in the loop for different purposes in a document processing workflow. Moreover, you'll learn best practices for auto-scaling your NLP inference for enterprise traffic. Whether you're new to ML or an experienced practitioner, by the end of this NLP book, you'll have the confidence to use AWS AI services to build powerful NLP applications. What you will learnAutomate various NLP workflows on AWS to accelerate business outcomesUse Amazon Textract for text, tables, and handwriting recognition from images and PDF filesGain insights from unstructured text in the form of sentiment analysis, topic modeling, and more using Amazon ComprehendSet up end-to-end document processing pipelines to understand the role of humans in the loopDevelop NLP-based intelligent search solutions with just a few lines of codeCreate both real-time and batch document processing pipelines using PythonWho this book is for If you're an NLP developer or data scientist looking to get started with AWS AI services to implement various NLP scenarios quickly, this book is for you. It will show you how easy it is to integrate AI in applications with just a few lines of code. A basic understanding of machine learning (ML) concepts is necessary to understand the concepts covered. Experience with Jupyter notebooks and Python

will be helpful.

Python for DevOps - Noah Gift 2019-12-12

Much has changed in technology over the past decade. Data is hot, the cloud is ubiquitous, and many organizations need some form of automation. Throughout these transformations, Python has become one of the most popular languages in the world. This practical resource shows you how to use Python for everyday Linux systems administration tasks with today's most useful DevOps tools, including Docker, Kubernetes, and Terraform. Learning how to interact and automate with Linux is essential for millions of professionals. Python makes it much easier. With this book, you'll learn how to develop software and solve problems using containers, as well as how to monitor, instrument, load-test, and operationalize your software. Looking for effective ways to "get stuff done" in Python? This is your guide. Python foundations, including a brief introduction to the language How to automate text, write command-line tools, and automate the filesystem Linux utilities, package management, build systems, monitoring and instrumentation, and automated testing Cloud computing, infrastructure as code, Kubernetes, and serverless Machine learning operations and data engineering from a DevOps perspective Building, deploying, and operationalizing a machine learning project

Mastering Machine Learning on AWS - Saket S. R. Mengle 2019-05-17

Python and AWS Cookbook - Mitch Garnaat 2011-10-31

This book focuses on Elastic Compute Cloud (EC2) and Simple Storage Service (S3) for developers writing in Python.

Ahead in the Cloud - Stephen Orban 2018-03-27

Cloud computing is the most significant technology development of our lifetimes. It has made countless new businesses possible and presents a massive opportunity for large enterprises to innovate like startups and retire decades of technical debt. But making the most of the cloud requires much more from enterprises than just a technology change. Stephen Orban led Dow Jones's journey toward digital agility as their CIO and now leads AWS's Enterprise Strategy function, where he helps leaders from the largest companies in the world transform their businesses. As he demonstrates in this book, enterprises must re-train their people, evolve their processes, and transform their cultures as they move to the cloud. By bringing together his experiences and those of a number of business leaders, Orban shines a light on what works, what doesn't, and how enterprises can transform themselves using the cloud.

Python Deep Learning Cookbook - Indra den Bakker 2017-10-27

Solve different problems in modelling deep neural networks using Python, Tensorflow, and Keras with this practical guide About This Book Practical recipes on training different neural network models and tuning them for optimal performance Use Python frameworks like TensorFlow, Caffe, Keras, Theano for Natural Language Processing, Computer Vision, and more A hands-on guide covering the common as well as the not so common problems in deep learning using Python Who This Book Is For This book is intended for machine learning professionals who are looking to use deep learning algorithms to create real-world applications using Python. Thorough understanding of the machine learning concepts and Python libraries such as NumPy, SciPy and scikit-learn is expected. Additionally, basic knowledge in linear algebra and calculus is desired. What You Will Learn Implement different neural network models in Python Select the best Python framework for deep learning such as PyTorch, Tensorflow, MXNet and Keras Apply tips and tricks related to neural networks internals, to boost learning performances Consolidate machine learning principles and apply them in the deep learning field Reuse and adapt Python code snippets to everyday problems Evaluate the cost/benefits and performance implication of each discussed solution In Detail Deep Learning is revolutionizing a wide range of industries. For many applications, deep learning has proven to outperform humans by making faster and more accurate predictions. This book provides a top-down and bottom-up approach to demonstrate deep learning solutions to real-world problems in different areas. These applications include Computer Vision, Natural Language Processing, Time Series, and Robotics. The Python Deep Learning Cookbook presents technical solutions to the issues presented, along with a detailed explanation of the solutions. Furthermore, a discussion on corresponding pros and cons of implementing the proposed solution using one of the popular frameworks like TensorFlow, PyTorch, Keras and CNTK is

provided. The book includes recipes that are related to the basic concepts of neural networks. All techniques s, as well as classical networks topologies. The main purpose of this book is to provide Python programmers a detailed list of recipes to apply deep learning to common and not-so-common scenarios. Style and approach Unique blend of independent recipes arranged in the most logical manner

Machine Learning in the AWS Cloud - Abhishek Mishra 2019-09-11

Put the power of AWS Cloud machine learning services to work in your business and commercial applications! Machine Learning in the AWS Cloud introduces readers to the machine learning (ML) capabilities of the Amazon Web Services ecosystem and provides practical examples to solve real-world regression and classification problems. While readers do not need prior ML experience, they are expected to have some knowledge of Python and a basic knowledge of Amazon Web Services. Part One introduces readers to fundamental machine learning concepts. You will learn about the types of ML systems, how they are used, and challenges you may face with ML solutions. Part Two focuses on machine learning services provided by Amazon Web Services. You'll be introduced to the basics of cloud computing and AWS offerings in the cloud-based machine learning space. Then you'll learn to use Amazon Machine Learning to solve a simpler class of machine learning problems, and Amazon SageMaker to solve more complex problems. • Learn techniques that allow you to preprocess data, basic feature engineering, visualizing data, and model building • Discover common neural network frameworks with Amazon SageMaker • Solve computer vision problems with Amazon Rekognition • Benefit from illustrations, source code examples, and sidebars in each chapter The book appeals to both Python developers and technical/solution architects. Developers will find concrete examples that show them how to perform common ML tasks with Python on AWS. Technical/solution architects will find useful information on the machine learning capabilities of the AWS ecosystem.

Python Web Scraping Cookbook - Michael Heydt 2018-02-09

Untangle your web scraping complexities and access web data with ease using Python scripts Key Features Hands-on recipes for advancing your web scraping skills to expert level One-stop solution guide to address complex and challenging web scraping tasks using Python Understand web page structures and collect data from a website with ease Book Description Python Web Scraping Cookbook is a solution-focused book that will teach you techniques to develop high-performance Scrapers, and deal with cookies, hidden form fields, Ajax-based sites and proxies. You'll explore a number of real-world scenarios where every part of the development or product life cycle will be fully covered. You will not only develop the skills to design reliable, high-performing data flows, but also deploy your codebase to Amazon Web Services (AWS). If you are involved in software engineering, product development, or data mining or in building data-driven products, you will find this book useful as each recipe has a clear purpose and objective. Right from extracting data from websites to writing a sophisticated web crawler, the book's independent recipes will be extremely helpful while on the job. This book covers Python libraries, requests, and BeautifulSoup. You will learn about crawling, web spidering, working with AJAX websites, and paginated items. You will also understand to tackle problems such as 403 errors, working with proxy, scraping images, and LXML. By the end of this book, you will be able to scrape websites more efficiently and deploy and operate your scraper in the cloud. What you will learn Use a variety of tools to scrape any website and data, including Scrapy and Selenium Master expression languages, such as XPath and CSS, and regular expressions to extract web data Deal with scraping traps such as hidden form fields, throttling, pagination, and different status codes Build robust scraping pipelines with SQS and RabbitMQ Scrape assets like image media and learn what to do when Scraper fails to run Explore ETL techniques of building a customized crawler, parser, and convert structured and unstructured data from websites Deploy and run your scraper as a service in AWS Elastic Container Service Who this book is for This book is ideal for Python programmers, web administrators, security professionals, and anyone who wants to perform web analytics. Familiarity with Python and basic understanding of web scraping will be useful to make the best of this book.

Machine Learning with Amazon SageMaker Cookbook - Joshua Arvin Lat 2021-10-29

A step-by-step solution-based guide to preparing building, training, and deploying high-quality machine learning models with Amazon SageMaker Key FeaturesPerform ML experiments with built-in and custom algorithms in SageMakerExplore proven solutions when working with TensorFlow, PyTorch, Hugging Face

Transformers, and scikit-learnUse the different features and capabilities of SageMaker to automate relevant ML processesBook Description Amazon SageMaker is a fully managed machine learning (ML) service that helps data scientists and ML practitioners manage ML experiments. In this book, you'll use the different capabilities and features of Amazon SageMaker to solve relevant data science and ML problems. This step-by-step guide features 80 proven recipes designed to give you the hands-on machine learning experience needed to contribute to real-world experiments and projects. You'll cover the algorithms and techniques that are commonly used when training and deploying NLP, time series forecasting, and computer vision models to solve ML problems. You'll explore various solutions for working with deep learning libraries and frameworks such as TensorFlow, PyTorch, and Hugging Face Transformers in Amazon SageMaker. You'll also learn how to use SageMaker Clarify, SageMaker Model Monitor, SageMaker Debugger, and SageMaker Experiments to debug, manage, and monitor multiple ML experiments and deployments. Moreover, you'll have a better understanding of how SageMaker Feature Store, Autopilot, and Pipelines can meet the specific needs of data science teams. By the end of this book, you'll be able to combine the different solutions you've learned as building blocks to solve real-world ML problems. What you will learnTrain and deploy NLP, time series forecasting, and computer vision models to solve different business problemsPush the limits of customization in SageMaker using custom container imagesUse AutoML capabilities with SageMaker Autopilot to create high-quality modelsWork with effective data analysis and preparation techniquesExplore solutions for debugging and managing ML experiments and deploymentsDeal with bias detection and ML explainability requirements using SageMaker ClarifyAutomate intermediate and complex deployments and workflows using a variety of solutionsWho this book is for This book is for developers, data scientists, and machine learning practitioners interested in using Amazon SageMaker to build, analyze, and deploy machine learning models with 80 step-by-step recipes. All you need is an AWS account to get things running. Prior knowledge of AWS, machine learning, and the Python programming language will help you to grasp the concepts covered in this book more effectively.

Data Science on AWS - Chris Fregly 2021-04-07
With this practical book, AI and machine learning practitioners will learn how to successfully build and deploy data science projects on Amazon Web Services. The Amazon AI and machine learning stack unifies data science, data engineering, and application development to help level upyour skills. This guide shows you how to build and run pipelines in the cloud, then integrate the results into applications in minutes instead of days. Throughout the book, authors Chris Fregly and Antje Barth demonstrate how to reduce cost and improve performance. Apply the Amazon AI and ML stack to real-world use cases for natural language processing, computer vision, fraud detection, conversational devices, and more Use automated machine learning to implement a specific subset of use cases with SageMaker Autopilot Dive deep into the complete model development lifecycle for a BERT-based NLP use case including data ingestion, analysis, model training, and deployment Tie everything together into a repeatable machine learning operations pipeline Explore real-time ML, anomaly detection, and streaming analytics on data streams with Amazon Kinesis and Managed Streaming for Apache Kafka Learn security best practices for data science projects and workflows including identity and access management, authentication, authorization, and more
Modern Python Standard Library Cookbook - Alessandro Molina 2018-08-31
Build optimized applications in Python by smartly implementing the standard library Key Features Strategic recipes for effective application development in Python Techniques to create GUIs and implement security through cryptography Best practices for developing readily scalable, production-ready applications Book Description The Python 3 Standard Library is a vast array of modules that you can use for developing various kinds of applications. It contains an exhaustive list of libraries, and this book will help you choose the best one to address specific programming problems in Python. The Modern Python Standard Library Cookbook begins with recipes on containers and data structures and guides you in performing effective text management in Python. You will find Python recipes for command-line operations, networking, filesystems and directories, and concurrent execution. You will learn about Python security essentials in Python and get to grips with various development tools for debugging, benchmarking, inspection, error reporting, and tracing. The book includes recipes to help you create graphical user interfaces for your application. You will

learn to work with multimedia components and perform mathematical operations on date and time. The recipes will also show you how to deploy different searching and sorting algorithms on your data. By the end of the book, you will have acquired the skills needed to write clean code in Python and develop applications that meet your needs. What you will learn Store multiple values per key in associative containers Create interactive character-based user interfaces Work with native time and display data for your time zone Read/write SGML family languages, both as a SAX and DOM parser to meet file sizes and other requirements Group equivalent items using itertools and sorted features together Use partials to create unary functions out of multi-argument functions Implement hashing algorithms to store passwords in a safe way Who this book is for If you are a developer who wants to write highly responsive, manageable, scalable, and resilient code in Python, this book is for you. Prior programming knowledge in Python will help you make the most out of the book.

Serverless Programming Cookbook - Heartin Kanikathottu 2019-01-31
Build, secure, and deploy real-world serverless applications in AWS and peek into the serverless cloud offerings from Azure, Google Cloud, and IBM Cloud Key FeaturesBuild serverless applications with AWS Lambda, AWS CloudFormation and AWS CloudWatchPerform data analytics and natural language processing(NLP)on the AWS serverless platformExplore various design patterns and best practices involved in serverless computingBook Description Managing physical servers will be a thing of the past once you're able to harness the power of serverless computing. If you're already prepped with the basics of serverless computing, Serverless Programming Cookbook will help you take the next step ahead. This recipe-based guide provides solutions to problems you might face while building serverless applications. You'll begin by setting up Amazon Web Services (AWS), the primary cloud provider used for most recipes. The next set of recipes will cover various components to build a Serverless application including REST APIs, database, user management, authentication, web hosting, domain registration, DNS management, CDN, messaging, notifications and monitoring. The book also introduces you to the latest technology trends such as Data Streams, Machine Learning and NLP. You will also see patterns and practices for using various services in a real world application. Finally, to broaden your understanding of Serverless computing, you'll also cover getting started guides for other cloud providers such as Azure, Google Cloud Platform and IBM cloud. By the end of this book, you'll have acquired the skills you need to build serverless applications efficiently using various cloud offerings. What you will learnServerless computing in AWS and explore services with other cloudsDevelop full-stack apps with API Gateway, Cognito, Lambda and DynamoDBWeb hosting with S3, CloudFront, Route 53 and AWS Certificate ManagerSQS and SNS for effective communication between microservices Monitoring and troubleshooting with CloudWatch logs and metrics Explore Kinesis Streams, Amazon ML models and Alexa Skills KitWho this book is for For developers looking for practical solutions to common problems while building a serverless application, this book provides helpful recipes. To get started with this intermediate-level book, knowledge of basic programming is a must.

AWS Cookbook - John Culkin 2021-12-02
This practical guide provides over 100 self-contained recipes to help you creatively solve issues you may encounter in your AWS cloud endeavors. If you're comfortable with rudimentary scripting and general cloud concepts, this cookbook will give you what you need to both address foundational tasks and create high-level capabilities. AWS Cookbook provides real-world examples that incorporate best practices. Each recipe includes code that you can safely execute in a sandbox AWS account to ensure that it works. From there, you can customize the code to help construct your application or fix your specific existing problem. Recipes also include a discussion that explains the approach and provides context. This cookbook takes you beyond theory, providing the nuts and bolts you need to successfully build on AWS. You'll find recipes for: Organizing multiple accounts for enterprise deployments Locking down S3 buckets Analyzing IAM roles Autoscaling a containerized service Summarizing news articles Standing up a virtual call center Creating a chatbot that can pull answers from a knowledge repository Automating security group rule monitoring, looking for rogue traffic flows And more.
Learning Amazon Web Services (AWS) - Mark Wilkins 2019-07-02
The Practical, Foundational Technical Introduction to the World's #1 Cloud Platform Includes access to several hours of online training video: Mark Wilkins' expert training video library guides you through

setting up core services and prepares you to deploy your own apps and resources. Learning Amazon Web Services (AWS) is the perfect foundational resource for all administrators, developers, project managers, and other IT professionals who want to plan and deploy AWS services and/or earn AWS certification. Top cloud trainer and evangelist Mark Wilkins teaches best practices that align with Amazon's Well-Architected Framework, introduces key concepts in the context of a running case study, carefully explains how core AWS services operate and integrate, and offers extensively tested tips for maximizing flexibility, security, and value. Companion online videos guide you step-by-step through setting AWS compute, storage, networking, scale, security, automation, and more. Balance cost, compliance, and latency in your service designs Choose the right networking options for your virtual private cloud (VPC) Build, host, launch, manage, and budget for EC2 compute services Plan for scale and resiliency, and make informed decisions about AWS storage Enforce strict security, and automate to improve operational efficiency This book with companion training videos is a valuable learning tool for anyone seeking to demonstrate expertise through formal certification. WEB EDITION: All buyers of the book or ebook can register your book for access to a free online Web Edition of this title, which included videos embedded within the text, plus updates as they become available.

Docker Cookbook - Sébastien Goasguen 2015-11-04
Whether you're deploying applications on-premise or in the cloud, this cookbook is for developers, operators, and IT professionals who need practical solutions for using Docker. The recipes in this book will help developers go from zero knowledge to distributed applications packaged and deployed within a couple of chapters. IT professionals will be able to use this cookbook to solve everyday problems, as well as create, run, share, and deploy Docker images quickly. Operators will learn and understand what developers are excited about and start to adopt the tools that will change the way they work.--

AWS Networking Cookbook - Satyajit Das 2017-08-24
Over 50 recipes covering all you need to know about AWS networking About This Book Master AWS networking concepts with AWS Networking Cookbook. Design and implement highly available connectivity and multi-regioned AWS solutions A recipe-based guide that will eliminate the complications of AWS networking. A guide to automate networking services and features Who This Book Is For This book targets administrators, network engineers, and solution architects who are looking at optimizing their cloud platform's connectivity. Some basic understanding of AWS would be beneficial. What You Will Learn Create basic network in AWS Create production grade network in AWS Create global scale network in AWS Security and Compliance with AWS Network Troubleshooting, best practices and limitations of AWS network Pricing model of AWS network components Route 53 and Cloudfront concepts and routing policies VPC Automation using Ansible and CloudFormation In Detail This book starts with practical recipes on the fundamentals of cloud networking and gradually moves on to configuring networks and implementing infrastructure automation. This book then supplies in-depth recipes on networking components like Network Interface, Internet Gateways, DNS, Elastic IP addresses, and VPN CloudHub. Later, this book also delves into designing, implementing, and optimizing static and dynamic routing architectures, multi-region solutions, and highly available connectivity for your enterprise. Finally, this book will teach you to troubleshoot your VPC's network, increasing your VPC's efficiency. By the end of this book, you will have advanced knowledge of AWS networking concepts and technologies and will have mastered implementing infrastructure automation and optimizing your VPC. Style and approach A set of exciting recipes on using AWS Networking services more effectively.

AWS Automation Cookbook - Nikit Swaraj 2017-11-24
Automate release processes, deployment, and continuous integration of your application as well as infrastructure automation with the powerful services offered by AWS About This Book Accelerate your infrastructure's productivity by implementing a continuous delivery pipeline within your environment Leverage AWS services and Jenkins 2.0 to perform complete application deployments on Linux servers This recipe-based guide that will help you minimize application deployment downtime Who This Book Is For This book is for developers and system administrators who are responsible for hosting their application and managing instances in AWS. It's also ideal for DevOps engineers looking to provide continuous integration, deployment, and delivery. A basic understanding of AWS, Jenkins, and some scripting knowledge is needed.

What You Will Learn Build a sample Maven and NodeJS Application using CodeBuild Deploy the application in EC2/Auto Scaling and see how CodePipeline helps you integrate AWS services Build a highly scalable and fault tolerant CI/CD pipeline Achieve the CI/CD of a microservice architecture application in AWS ECS using CodePipeline, CodeBuild, ECR, and CloudFormation Automate the provisioning of your infrastructure using CloudFormation and Ansible Automate daily tasks and audit compliance using AWS Lambda Deploy microservices applications on Kubernetes using Jenkins Pipeline 2.0 In Detail AWS CodeDeploy, AWS CodeBuild, and CodePipeline are scalable services offered by AWS that automate an application's build and deployment pipeline. In order to deliver tremendous speed and agility, every organization is moving toward automating an entire application pipeline. This book will cover all the AWS services required to automate your deployment to your instances. You'll begin by setting up and using one of the AWS services for automation – CodeCommit. Next, you'll learn how to build a sample Maven and NodeJS Application using CodeBuild. After you've built the application, you'll see how to use CodeDeploy to deploy the application in EC2/Autoscaling. You'll also build a highly scalable and fault tolerant continuous integration (CI)/continuous deployment (CD) pipeline using some easy-to-follow recipes. Following this, you'll achieve CI/CD for Microservices application and reduce the risk within your software development lifecycle. You'll also learn to set up an infrastructure using CloudFormation Template and Ansible, and see how to automate AWS resources using AWS Lambda. Finally, you'll learn to automate instances in AWS and automate the deployment lifecycle of applications.By the end of this book, you'll be able to minimize application downtime and implement CI/CD, gaining total control over your software development lifecycle. Style and approach This book takes a "How to do it" approach, providing with easy solutions to automate common maintenance and deployment tasks.

AWS Lambda in Action - Danilo Poccia 2016-11-27
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. 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 PART 1 - FIRST STEPS Running functions in the cloud Your first Lambda function Your function as a web API PART 2 - BUILDING EVENT-DRIVEN APPLICATIONS 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? PART 3 - FROM DEVELOPMENT TO PRODUCTION Improving development and testing Automating deployment Automating infrastructure management PART 4 - USING EXTERNAL SERVICES Calling external services Receiving events from other services

Python and AWS Cookbook - Mitch Garnaat 2011-10-24
If you intend to use Amazon Web Services (AWS) for remote computing and storage, Python is an ideal programming language for developing applications and controlling your cloud-based infrastructure. This cookbook gets you started with more than two dozen recipes for using Python with AWS, based on the

author's boto library. You'll find detailed recipes for working with the S3 storage service as well as EC2, the service that lets you design and build cloud applications. Each recipe includes a code solution you can use immediately, along with a discussion of why and how the recipe works. You also get detailed advice for using boto with AWS and other cloud services. This book's recipes include methods to help you: Launch instances on EC2, and keep track of them with tags Associate an Elastic IP address with an instance Restore a failed Elastic Block Store volume from a snapshot Store and monitor your own custom metrics in CloudWatch Create a bucket in S3 to contain your data objects Reduce the cost of storing noncritical data Prevent accidental deletion of data in S3

AWS Security Cookbook - Heartin Kanikathottu 2020-02-27
Secure your Amazon Web Services (AWS) infrastructure with permission policies, key management, and network security, along with following cloud security best practices Key FeaturesExplore useful recipes for implementing robust cloud security solutions on AWSMonitor your AWS infrastructure and workloads using CloudWatch, CloudTrail, config, GuardDuty, and MaciePrepare for the AWS Certified Security-Specialty exam by exploring various security models and compliance offeringsBook Description As a security consultant, securing your infrastructure by implementing policies and following best practices is critical. This cookbook discusses practical solutions to the most common problems related to safeguarding infrastructure, covering services and features within AWS that can help you implement security models such as the CIA triad (confidentiality, integrity, and availability), and the AAA triad (authentication, authorization, and availability), along with non-repudiation. The book begins with IAM and S3 policies and later gets you up to speed with data security, application security, monitoring, and compliance. This includes everything from using firewalls and load balancers to secure endpoints, to leveraging Cognito for managing users and authentication. Over the course of this book, you'll learn to use AWS security services such as Config for monitoring, as well as maintain compliance with GuardDuty, Macie, and Inspector. Finally, the book covers cloud security best practices and demonstrates how you can integrate additional security services such as Glacier Vault Lock and Security Hub to further strengthen your infrastructure. By the end of this book, you'll be well versed in the techniques required for securing AWS deployments, along with having the knowledge to prepare for the AWS Certified Security – Specialty certification. What you will learnCreate and manage users, groups, roles, and policies across accountsUse AWS Managed Services for logging, monitoring, and auditingCheck compliance with AWS Managed Services that use machine learningProvide security and availability for EC2 instances and applicationsSecure data using symmetric and asymmetric encryptionManage user pools and identity pools with federated loginWho this book is for If you are an IT security professional, cloud security architect, or a cloud application developer working on security-related roles and are interested in using AWS infrastructure for secure application deployments, then this Amazon Web Services book is for you. You will also find this book useful if you're looking to achieve AWS certification. Prior knowledge of AWS and cloud computing is required to get the most out of this book.

Amazon Redshift Cookbook - Shruti Worlikar 2021-07-23
Discover how to build a cloud-based data warehouse at petabyte-scale that is burstable and built to scale for end-to-end analytical solutions Key FeaturesDiscover how to translate familiar data warehousing concepts into Redshift implementationUse impressive Redshift features to optimize development, productionizing, and operations processesFind out how to use advanced features such as concurrency scaling, Redshift Spectrum, and federated queriesBook Description Amazon Redshift is a fully managed, petabyte-scale AWS cloud data warehousing service. It enables you to build new data warehouse workloads on AWS and migrate on-premises traditional data warehousing platforms to Redshift. This book on Amazon Redshift starts by focusing on Redshift architecture, showing you how to perform database administration tasks on Redshift. You'll then learn how to optimize your data warehouse to quickly execute complex analytic queries against very large datasets. Because of the massive amount of data involved in data warehousing, designing your database for analytical processing lets you take full advantage of Redshift's columnar architecture and managed services. As you advance, you'll discover how to deploy fully automated and highly scalable extract, transform, and load (ETL) processes, which help minimize the operational efforts that you have to invest in managing regular ETL pipelines and ensure the timely and

accurate refreshing of your data warehouse. Finally, you'll gain a clear understanding of Redshift use cases, data ingestion, data management, security, and scaling so that you can build a scalable data warehouse platform. By the end of this Redshift book, you'll be able to implement a Redshift-based data analytics solution and have understood the best practice solutions to commonly faced problems. What you will learnUse Amazon Redshift to build petabyte-scale data warehouses that are agile at scaleIntegrate your data warehousing solution with a data lake using purpose-built features and services on AWSBuild end-to-end analytical solutions from data sourcing to consumption with the help of useful recipesLeverage Redshift's comprehensive security capabilities to meet the most demanding business requirementsFocus on architectural insights and rationale when using analytical recipesDiscover best practices for working with big data to operate a fully managed solutionWho this book is for This book is for anyone involved in architecting, implementing, and optimizing an Amazon Redshift data warehouse, such as data warehouse developers, data analysts, database administrators, data engineers, and data scientists. Basic knowledge of data warehousing, database systems, and cloud concepts and familiarity with Redshift will be beneficial.

Building Serverless Applications with Python - Jalem Raj Rohit 2018-04-20
Building efficient Python applications at minimal cost by adopting serverless architectures Key Features Design and set up a data flow between cloud services and custom business logic Make your applications efficient and reliable using serverless architecture Build and deploy scalable serverless Python APIs Book Description Serverless architectures allow you to build and run applications and services without having to manage the infrastructure. Many companies have adopted this architecture to save cost and improve scalability. This book will help you design serverless architectures for your applications with AWS and Python. The book is divided into three modules. The first module explains the fundamentals of serverless architecture and how AWS lambda functions work. In the next module, you will learn to build, release, and deploy your application to production. You will also learn to log and test your application. In the third module, we will take you through advanced topics such as building a serverless API for your application. You will also learn to troubleshoot and monitor your app and master AWS lambda programming concepts with API references. Moving on, you will also learn how to scale up serverless applications and handle distributed serverless systems in production. By the end of the book, you will be equipped with the knowledge required to build scalable and cost-efficient Python applications with a serverless framework. What you will learn Understand how AWS Lambda and Microsoft Azure Functions work and use them to create an application Explore various triggers and how to select them, based on the problem statement Build deployment packages for Lambda functions Master the finer details about building Lambda functions and versioning Log and monitor serverless applications Learn about security in AWS and Lambda functions Scale up serverless applications to handle huge workloads and serverless distributed systems in production Understand SAM model deployment in AWS Lambda Who this book is for This book is for Python developers who would like to learn about serverless architecture. Python programming knowledge is assumed.

Building Serverless Microservices in Python - Richard Takashi Freeman 2019-03-29
A practical guide for developing end-to-end serverless microservices in Python for developers, DevOps, and architects. Key Features Create a secure, cost-effective, and scalable serverless data API Use identity management and authentication for a user-specific and secure web application Go beyond traditional web hosting to explore the full range of cloud hosting options Book Description Over the last few years, there has been a massive shift from monolithic architecture to microservices, thanks to their small and independent deployments that allow increased flexibility and agile delivery. Traditionally, virtual machines and containers were the principal mediums for deploying microservices, but they involved a lot of operational effort, configuration, and maintenance. More recently, serverless computing has gained popularity due to its built-in autoscaling abilities, reduced operational costs, and increased productivity. Building Serverless Microservices in Python begins by introducing you to serverless microservice structures. You will then learn how to create your first serverless data API and test your microservice. Moving on, you'll delve into data management and work with serverless patterns. Finally, the book introduces you to the importance of securing microservices. By the end of the book, you will have gained the skills you need to combine microservices with serverless computing, making their deployment much

easier thanks to the cloud provider managing the servers and capacity planning. What you will learn Discover what microservices offer above and beyond other architectures Create a serverless application with AWS Gain secure access to data and resources Run tests on your configuration and code Create a highly available serverless microservice data API Build, deploy, and run your serverless configuration and code Who this book is for If you are a developer with basic knowledge of Python and want to learn how to build, test, deploy, and secure microservices, then this book is for you. No prior knowledge of building microservices is required.

Python Machine Learning - Brady Ellison

Ready to discover the Machine Learning world? Machine learning paves the path into the future and it's powered by Python. All industries can benefit from machine learning and artificial intelligence whether we're talking about private businesses, healthcare, infrastructure, banking, or social media. What exactly does it do for us and what does a machine learning specialist do? Machine learning professionals create and implement special algorithms that can learn from existing data to make an accurate prediction on new never before seen data. Python Machine Learning presents you a step-by-step guide on how to create machine learning models that lead to valuable results. The book focuses on machine learning theory as much as practical examples. You will learn how to analyse data, use visualization methods, implement regression and classification models, and how to harness the power of neural networks. By purchasing this book, your machine learning journey becomes a lot easier. While a minimal level of Python programming is recommended, the algorithms and techniques are explained in such a way that you don't need to be intimidated by mathematics. The Topics Covered Include: Machine learning fundamentals How to set up the development environment How to use Python libraries and modules like Scikit-learn, TensorFlow, Matplotlib, and NumPy How to explore data How to solve regression and classification problems Decision trees k-means clustering Feed-forward and recurrent neural networks Get your copy now

Learn Amazon SageMaker - Julien Simon 2020-08-27

Quickly build and deploy machine learning models without managing infrastructure, and improve productivity using Amazon SageMaker's capabilities such as Amazon SageMaker Studio, Autopilot, Experiments, Debugger, and Model Monitor Key FeaturesBuild, train, and deploy machine learning models quickly using Amazon SageMakerAnalyze, detect, and receive alerts relating to various business problems using machine learning algorithms and techniquesImprove productivity by training and fine-tuning machine learning models in productionBook Description Amazon SageMaker enables you to quickly build, train, and deploy machine learning (ML) models at scale, without managing any infrastructure. It helps you focus on the ML problem at hand and deploy high-quality models by removing the heavy lifting typically involved in each step of the ML process. This book is a comprehensive guide for data scientists and ML developers who want to learn the ins and outs of Amazon SageMaker. You'll understand how to use various modules of SageMaker as a single toolset to solve the challenges faced in ML. As you progress, you'll cover features such as AutoML, built-in algorithms and frameworks, and the option for writing your own code and algorithms to build ML models. Later, the book will show you how to integrate Amazon SageMaker with popular deep learning libraries such as TensorFlow and PyTorch to increase the capabilities of existing models. You'll also learn to get the models to production faster with minimum effort and at a lower cost. Finally, you'll explore how to use Amazon SageMaker Debugger to analyze, detect, and highlight problems to understand the current model state and improve model accuracy. By the end of this Amazon book, you'll be able to use Amazon SageMaker on the full spectrum of ML workflows, from experimentation, training, and monitoring to scaling, deployment, and automation. What you will learnCreate and automate end-to-end machine learning workflows on Amazon Web Services (AWS)Become well-versed with data annotation and preparation techniquesUse AutoML features to build and train machine learning models with AutoPilotCreate models using built-in algorithms and frameworks and your own codeTrain computer vision and NLP models using real-world examplesCover training techniques for scaling, model optimization, model debugging, and cost optimizationAutomate deployment tasks in a variety of configurations using SDK and several automation toolsWho this book is for This book is for software engineers, machine learning developers, data scientists, and AWS users who are new to using Amazon SageMaker and want to build high-quality machine learning models without worrying about infrastructure. Knowledge of AWS basics is required to grasp the concepts covered in this book more effectively. Some understanding of machine learning concepts and the Python programming language will also be beneficial.

Amazon Web Services For Dummies - Bernard Golden 2013-08-09

Create dynamic cloud-based websites with Amazon Web Services and this friendly guide! As the largest cloud computing platform in the world, Amazon Web Services (AWS) provides one of the most popular web services options available. This easy-to-understand guide is the perfect introduction to the Amazon Web Services platform and all it can do for you. You'll learn about the Amazon Web Services tool set; how different web services (including S3, Amazon EC2, and Amazon Flexible Payments) and Glacier work; and how you can implement AWS in your organization. Explains how to use Amazon Web Services to store objects, take payments, manage large quantities of data, send e-mails, deploy push notifications, and more from your website Details how AWS can reduce costs, improve efficiency, increase productivity, and cut down on expensive hardware investments - and administrative headaches - in your organization Includes practical examples and helpful step-by-step lists to help you experiment with different AWS features and create a robust website that meets your needs Amazon Web Services For Dummies is exactly what you need to get your head in the cloud with Amazon Web Services!

Flask Framework Cookbook - Shalabh Aggarwal 2019-07-17

Build state-of-the-art web applications quickly and efficiently using Flask and related technologies with Python 3 Key FeaturesUpdated to Flask 1.0.3 and Python 3.7 with coverage of MicroservicesGet the most out of the powerful Flask framework and maintain the flexibility of your design choicesWrite cleaner and maintainable code with the help of sample appsBook Description Flask, the lightweight Python web framework, is popular due to its powerful modular design that lets you build scalable web apps. With this recipe-based guide, you'll explore modern solutions and best practices for Flask web development. Updated to the latest version of Flask and Python 3, this second edition of Flask Framework Cookbook moves away from some of the old and obsolete libraries and introduces recipes on bleeding edge technologies. You'll discover different ways of using Flask to create, deploy, and manage microservices. This Flask Python book starts by covering the different configurations that a Flask application can make use of, and then helps you work with templates and learn about the ORM and view layers. You'll also be able to write an admin interface and get to grips with debugging and logging errors. Finally, you'll grasp a variety of deployment and post-deployment techniques for platforms such as Apache, Tornado, and Heroku. By the end of this book, you'll have gained all the knowledge you need to write Flask applications in the best possible way and scale them using standard industry practices. What you will learnExplore web application development in Flask, right from installation to post-deployment stagesMake use of advanced templating and data modeling techniquesDiscover effective debugging, logging, and error handling techniques in FlaskIntegrate Flask with different technologies such as Redis, Sentry, and MongoDBDeploy and package Flask applications with Docker and KubernetesDesign scalable microservice architecture using AWS LambdaContinuous integration and Continuous deploymentWho this book is for If you are a web developer who wants to learn more about developing scalable and production-ready applications in Flask, this is the book for you. You'll also find this book useful if you are already aware of Flask's major extensions and want to use them for better application development. Basic Python programming experience along with basic understanding of Flask is assumed.

Data Wrangling with Python - Dr. Tirthajyoti Sarkar 2019-02-28

Simplify your ETL processes with these hands-on data hygiene tips, tricks, and best practices. Key FeaturesFocus on the basics of data wranglingStudy various ways to extract the most out of your data in less timeBoost your learning curve with bonus topics like random data generation and data integrity checksBook Description For data to be useful and meaningful, it must be curated and refined. Data Wrangling with Python teaches you the core ideas behind these processes and equips you with knowledge of the most popular tools and techniques in the domain. The book starts with the absolute basics of Python, focusing mainly on data structures. It then delves into the fundamental tools of data wrangling like NumPy and Pandas libraries. You'll explore useful insights into why you should stay away from traditional ways of data cleaning, as done in other languages, and take advantage of the specialized pre-built routines in Python. This combination of Python tips and tricks will also demonstrate how to use the same Python

backend and extract/transform data from an array of sources including the Internet, large database vaults, and Excel financial tables. To help you prepare for more challenging scenarios, you'll cover how to handle missing or wrong data, and reformat it based on the requirements from the downstream analytics tool. The book will further help you grasp concepts through real-world examples and datasets. By the end of this book, you will be confident in using a diverse array of sources to extract, clean, transform, and format your data efficiently. What you will learnUse and manipulate complex and simple data structuresHarness the full potential of DataFrames and numpy.array at run timePerform web scraping with BeautifulSoup4 and html5libExecute advanced string search and manipulation with RegEXHandle outliers and perform data imputation with PandasUse descriptive statistics and plotting techniquesPractice data wrangling and modeling using data generation techniquesWho this book is for Data Wrangling with Python is designed for developers, data analysts, and business analysts who are keen to pursue a career as a full-fledged data scientist or analytics expert. Although, this book is for beginners, prior working knowledge of Python is necessary to easily grasp the concepts covered here. It will also help to have rudimentary knowledge of relational database and SQL.

OpenCV 3 Computer Vision with Python Cookbook - Aleksei Spizhevoi 2018-03-23
Recipe-based approach to tackle the most common problems in Computer Vision by leveraging the functionality of OpenCV using Python APIs Key Features ●Build computer vision applications with OpenCV functionality via Python API ●Get to grips with image processing, multiple view geometry, and machine learning ●Learn to use deep learning models for image classification, object detection, and face recognition Book Description OpenCV 3 is a native cross-platform library for computer vision, machine learning, and image processing. OpenCV's convenient high-level APIs hide very powerful internals designed for computational efficiency that can take advantage of multicore and GPU processing. This book will help you tackle increasingly challenging computer vision problems by providing a number of recipes that you can use to improve your applications. In this book, you will learn how to process an image by manipulating pixels and analyze an image using histograms. Then, we'll show you how to apply image filters to enhance image content and exploit the image geometry in order to relay different views of a pictured scene. We'll explore techniques to achieve camera calibration and perform a multiple-view analysis. Later, you'll work on reconstructing a 3D scene from images, converting low-level pixel information to high-level concepts for applications such as object detection and recognition. You'll also discover how to process video from files or cameras and how to detect and track moving objects. Finally, you'll get acquainted with recent approaches in deep learning and neural networks. By the end of the book, you'll be able to apply your skills in OpenCV to create computer vision applications in various domains. What you will learn ●Get familiar with low-level image processing methods ●See the common linear algebra tools needed in computer vision ●Work with different camera models and epipolar geometry ●Find out how to detect interesting points in images and compare them ●Binarize images and mask out regions of interest ●Detect objects and track them in videos Who this book is for This book is for developers who have a basic knowledge of Python. If you are aware of the basics of OpenCV and are ready to build computer vision systems that are smarter, faster, more complex, and more practical than the competition, then this book is for you.

Amazon Web Services in Action - Michael Wittig 2018-09-15
Summary Amazon Web Services in Action, Second Edition is a comprehensive introduction to computing, storing, and networking in the AWS cloud. You'll find clear, relevant coverage of all the essential AWS services you to know, emphasizing best practices for security, high availability and scalability. Foreword by Ben Whaley, AWS community hero and author. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The largest and most mature of the cloud platforms, AWS offers over 100 prebuilt services, practically limitless compute resources, bottomless secure storage, as well as top-notch automation capabilities. This book shows you how to develop, host, and manage applications on AWS. About the Book Amazon Web Services in Action, Second Edition is a comprehensive introduction to deploying web applications in the AWS cloud. You'll find clear, relevant coverage of all essential AWS services, with a focus on automation, security, high availability, and scalability. This thoroughly revised edition covers the latest additions to AWS, including serverless infrastructure with AWS Lambda, sharing data with EFS, and in-memory storage with ElastiCache. What's

inside Completely revised bestseller Secure and scale distributed applications Deploy applications on AWS Design for failure to achieve high availability Automate your infrastructure About the Reader Written for mid-level developers and DevOps engineers. About the Author Andreas Wittig and Michael Wittig are software engineers and DevOps consultants focused on AWS. Together, they migrated the first bank in Germany to AWS in 2013. Table of Contents PART 1 - GETTING STARTED What is Amazon Web Services? A simple example: WordPress in five minutes PART 2 - BUILDING VIRTUAL INFRASTRUCTURE CONSISTING OF COMPUTERS AND NETWORKING Using virtual machines: EC2 Programming your infrastructure: The command-line, SDKs, and CloudFormation Automating deployment: CloudFormation, Elastic Beanstalk, and OpsWorks Securing your system: IAM, security groups, and VPC Automating operational tasks with Lambda PART 3 - STORING DATA IN THE CLOUD Storing your objects: S3 and Glacier Storing data on hard drives: EBS and instance store Sharing data volumes between machines: EFS Using a relational database service: RDS Caching data in memory: Amazon ElastiCache Programming for the NoSQL database service: DynamoDB PART 4 - ARCHITECTING ON AWS Achieving high availability: availability zones, auto-scaling, and CloudWatch Decoupling your infrastructure: Elastic Load Balancing and Simple Queue Service Designing for fault tolerance Scaling up and down: auto-scaling and CloudWatch

Machine Learning with Python Cookbook - Chris Albon 2018-03-09
This practical guide provides nearly 200 self-contained recipes to help you solve machine learning challenges you may encounter in your daily work. If you're comfortable with Python and its libraries, including pandas and scikit-learn, you'll be able to address specific problems such as loading data, handling text or numerical data, model selection, and dimensionality reduction and many other topics. Each recipe includes code that you can copy and paste into a toy dataset to ensure that it actually works. From there, you can insert, combine, or adapt the code to help construct your application. Recipes also include a discussion that explains the solution and provides meaningful context. This cookbook takes you beyond theory and concepts by providing the nuts and bolts you need to construct working machine learning applications. You'll find recipes for: Vectors, matrices, and arrays Handling numerical and categorical data, text, images, and dates and times Dimensionality reduction using feature extraction or feature selection Model evaluation and selection Linear and logical regression, trees and forests, and k-nearest neighbors Support vector machines (SVM), naïve Bayes, clustering, and neural networks Saving and loading trained models

Python Automation Cookbook - Jaime Buelta 2018-09-27
Step-by-step instructions which take you through each program to automate monotonous tasks with Python 3.7 Key Features Automate integral business processes such as report generation, email marketing, and lead generation Build your first web application that scrapes data and accesses websites' APIs Create graphic-rich charts, graphs, and maps using Matplotlib Book Description Have you been doing the same old monotonous office work over and over again? Or have you been trying to find an easy way to make your life better by automating some of your repetitive tasks? Through a tried and tested approach, understand how to automate all the boring stuff using Python. The Python Automation Cookbook helps you develop a clear understanding of how to automate your business processes using Python, including detecting opportunities by scraping the web, analyzing information to generate automatic spreadsheets reports with graphs, and communicating with automatically generated emails. You'll learn how to get notifications via text messages and run tasks while your mind is focused on other important activities, followed by understanding how to scan documents such as résumés. Once you've gotten familiar with the fundamentals, you'll be introduced to the world of graphs, along with studying how to produce organized charts using Matplotlib. In addition to this, you'll gain in-depth knowledge of how to generate rich graphics showing relevant information. By the end of this book, you'll have refined your skills by attaining a sound understanding of how to identify and correct problems to produce superior and reliable systems. What you will learn Get to grips with scraping a website to detect changes Search and process raw sales files to aggregate information in spreadsheets Explore techniques to extract information from an Excel spreadsheet and generate exciting reports with graphs Discover the techniques required to generate random, print-friendly codes to be used as single-use coupons Automatically generate a marketing campaign, contacting the recipients over different channels Identify and implement precise solutions Who this book is for The Python Automation

Cookbook is for you if you are a developer or anyone who wants to automate monotonous manual tasks related to fields such as finance, sales, and HR, among others.