

# Python Tutorial Aws

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*Proceedings of the Future Technologies Conference (FTC) 2021, Volume 1* - Kohei Arai 2021-10-23

This book covers a wide range of important topics including but not limited to Technology Trends, Computing, Artificial Intelligence, Machine Vision, Communication, Security, e-Learning, and Ambient Intelligence and their applications to the real world. The sixth Future Technologies Conference 2021 was organized virtually and received a total of 531 submissions from academic pioneering researchers, scientists, industrial engineers, and students from all over the world.. After a double-blind peer review process, 191 submissions have been selected to be included in these proceedings. One of the meaningful and valuable dimensions of this conference is the way it brings together a large group of technology geniuses in one venue to not only present breakthrough research in future technologies, but also to promote discussions and debate of relevant issues, challenges, opportunities and research findings. We hope that readers find the book interesting, exciting, and inspiring; it provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research.

**No-Code Artificial Intelligence** - Ambuj Agrawal 2023-03-07

A practical guide that will help you build AI and ML solutions faster with fewer efforts and no programming knowledge  
**KEY FEATURES** ● Start your journey to become an AI expert today. ● Learn how to build AI solutions to solve complex problems in your organization. ● Get familiar with different No-code AI tools and platforms.  
**DESCRIPTION** “No-Code Artificial Intelligence” is a book that enables you to develop AI applications without any programming knowledge. Authored by the founder of AICromo (<https://aicromo.com/>), this book takes you through an array of examples that shows how to build AI solutions using No-code AI tools. The book starts by sharing insights on the evolution of No-code AI and the different types of No-code AI tools and platforms available in the market. The book then helps you start building applications of Machine Learning in Finance, Healthcare, Sales, and Cybersecurity. It will also teach you to create AI applications to perform sales forecasting, find fraudulent claims, and detect diseases in plants. Furthermore, the book will show how to build Machine Learning models for a variety of use cases in image recognition, video object recognition, and data prediction. After reading this book, you will be able to build AI applications with ease.  
**WHAT YOU WILL LEARN** ● Use different No-code AI tools such as AWS Sagemaker, DataRobot, and Google AutoML. ● Learn how to create a Machine Learning model to predict housing prices. ● Build Natural Language Processing (NLP) models for Healthcare information Identification. ● Learn how to build an AI model to create targeted customer offerings. ● Use traditional ways to perform AI implementation using programming languages and AI libraries.  
**WHO THIS BOOK IS FOR** This book is for anyone who wants to build an AI app without writing any code. It is also helpful for current and aspiring AI and Machine Learning professionals who are looking to build automated,

intelligent, and smart AI-based solutions. **TABLE OF CONTENTS** 1. What is AI? 2. Getting Started with No-Code AI 3. Building AI Model to Predict Housing Prices 4. Classifying Different Images 5. Building AI Model to Perform Sales Forecasting 6. Building AI Model to Find Fraudulent Claims 7. Building AI Model to Detect Diseases in Plants 8. Building AI Model to Create Targeted Customer Offerings 9. Building AI Model for Healthcare Information Identification 10. Building AI Model for Video Action Recognition 11. Building AI Applications with Coded AI

**Generative Adversarial Networks with Python** - Jason Brownlee 2019-07-11

Step-by-step tutorials on generative adversarial networks in python for image synthesis and image translation.

*Monetizing Machine Learning* - Manuel Amunategui 2018-09-12

Take your Python machine learning ideas and create serverless web applications accessible by anyone with an Internet connection. Some of the most popular serverless cloud providers are covered in this book—Amazon, Microsoft, Google, and PythonAnywhere. You will work through a series of common Python data science problems in an increasing order of complexity. The practical projects presented in this book are simple, clear, and can be used as templates to jump-start many other types of projects. You will learn to create a web application around numerical or categorical predictions, understand the analysis of text, create powerful and interactive presentations, serve restricted access to data, and leverage web plugins to accept credit card payments and donations. You will get your projects into the hands of the world in no time. Each chapter follows three steps: modeling the right way, designing and developing a local web application, and deploying onto a popular and reliable serverless cloud provider. You can easily jump to or skip particular topics in the book. You also will have access to Jupyter notebooks and code repositories for complete versions of the code covered in the book.  
**What You'll Learn** Extend your machine learning models using simple techniques to create compelling and interactive web dashboards Leverage the Flask web framework for rapid prototyping of your Python models and ideas Create dynamic content powered by regression coefficients, logistic regressions, gradient boosting machines, Bayesian classifications, and more Harness the power of TensorFlow by exporting saved models into web applications Create rich web dashboards to handle complex real-time user input with JavaScript and Ajax to yield interactive and tailored content Create dashboards with paywalls to offer subscription-based access Access API data such as Google Maps, OpenWeather, etc. Apply different approaches to make sense of text data and return customized intelligence Build an intuitive and useful recommendation site to add value to users and entice them to keep coming back Utilize the freemium offerings of Google Analytics and analyze the results Take your ideas all the way to your customer's plate using the top serverless cloud providers  
**Who This Book Is For** Those with some programming experience with Python, code editing, and access to an interpreter in

working order. The book is geared toward entrepreneurs who want to get their ideas onto the web without breaking the bank, small companies without an IT staff, students wanting exposure and training, and for all data science professionals ready to take things to the next level.

**AWS Lambda Quick Start Guide** - Markus Klems 2018-06-29  
Discover techniques and tools for building serverless applications with AWS Lambda  
Key Features  
Learn to write, run, and deploy Lambda functions in the AWS cloud  
Make the most of AWS Lambda functions to build scalable and cost-efficient systems  
A practical guide to developing serverless services and applications in Node.js, Java, Python, and C#  
Book Description  
AWS Lambda is a part of AWS that lets you run your code without provisioning or managing servers. This enables you to deploy applications and backend services that operate with no upfront cost. This book gets you up to speed on how to build scalable systems and deploy serverless applications with AWS Lambda. The book starts with the fundamental concepts of AWS Lambda, and then teaches you how to combine your applications with other AWS services, such as AmazonAPI Gateway and DynamoDB. This book will also give a quick walk through on how to use the Serverless Framework to build larger applications that can structure code or autogenerate boilerplate code that can be used to get started quickly for increased productivity. Toward the end of the book, you will learn how to write, run, and test Lambda functions using Node.js, Java, Python, and C#. What you will learn  
Understand the fundamental concepts of AWS Lambda  
Get to grips with the Serverless Framework and how to create a serverless project  
Testing and debugging Lambda functions  
Create a stateful, serverless backend with DynamoDB  
Program AWS Lambda with Java, Python, and C#  
Program a lambda function with Node.js  
Who this book is for  
This book is primarily for IT architects and developers who want to build scalable systems and deploy serverless applications with AWS Lambda. No prior knowledge of AWS is necessary.

*Programming the Internet of Things* - Andy King  
2021-06-10

Learn how to program the Internet of Things with this hands-on guide. By breaking down IoT programming complexities in step-by-step, building-block fashion, author and educator Andy King shows you how to design and build your own full-stack, end-to-end IoT solution-- from device to cloud. This practical book walks you through tooling, development environment setup, solution design, and implementation. You'll learn how a typical IoT ecosystem works, as well as how to tackle integration challenges that crop up when implementing your own IoT solution. Whether you're an engineering student learning the basics of the IoT, a tech-savvy executive looking to better understand the nuances of IoT technology stacks, or a programmer building your own smart house solution, this practical book will help you get started. Design an end-to-end solution that implements an IoT use case  
Set up an IoT-centric development and testing environment  
Organize your software design by creating abstractions in Python and Java  
Use MQTT, CoAP, and other protocols to connect IoT devices and services  
Create a custom JSON-based data format that's consumable across a range of platforms and services  
Use cloud services to support your IoT ecosystem and provide business value for stakeholders

**Building Serverless Python Apps Using FastAPI and AWS** - Eidan James Rosado 2022-06-01

There are varying ways one can pursue starting a new or converting an existing project to a Serverless architecture. One of the many arguments heard is that developers typically don't know where to begin. This book is intended for those seeking to leverage a Serverless set up with a FastAPI project. This book provides a step-by-step guide for building Python APIs

on AWS using FastAPI, AWS CDK, GraphQL, and more! It aims to solve one of the more predominant causes of delaying the transition to Serverless by providing engineers with an outline of where to begin on their Serverless journey. Code samples are provided to demonstrate several avenues that can be taken as well as some housekeeping items like formatting and building the continuous integration and delivery pipeline. Readers also get end-of-chapter quizzes, cheat sheets, and access to the full source code from the examples in this book.

XGBoost With Python - Jason Brownlee 2016-08-05

XGBoost is the dominant technique for predictive modeling on regular data. The gradient boosting algorithm is the top technique on a wide range of predictive modeling problems, and XGBoost is the fastest implementation. When asked, the best machine learning competitors in the world recommend using XGBoost. In this Ebook, learn exactly how to get started and bring XGBoost to your own machine learning projects.

Data Analysis with Python - David Taieb 2018-12-31

Learn a modern approach to data analysis using Python to harness the power of programming and AI across your data. Detailed case studies bring this modern approach to life across visual data, social media, graph algorithms, and time series analysis. Key Features  
Bridge your data analysis with the power of programming, complex algorithms, and AI  
Use Python and its extensive libraries to power your way to new levels of data insight  
Work with AI algorithms, TensorFlow, graph algorithms, NLP, and financial time series  
Explore this modern approach across with key industry case studies and hands-on projects  
Book Description  
Data Analysis with Python offers a modern approach to data analysis so that you can work with the latest and most powerful Python tools, AI techniques, and open source libraries.

Industry expert David Taieb shows you how to bridge data science with the power of programming and algorithms in Python. You'll be working with complex algorithms, and cutting-edge AI in your data analysis. Learn how to analyze data with hands-on examples using Python-based tools and Jupyter Notebook. You'll find the right balance of theory and practice, with extensive code files that you can integrate right into your own data projects. Explore the power of this approach to data analysis by then working with it across key industry case studies. Four fascinating and full projects connect you to the most critical data analysis challenges you're likely to meet in today. The first of these is an image recognition application with TensorFlow – embracing the importance today of AI in your data analysis. The second industry project analyses social media trends, exploring big data issues and AI approaches to natural language processing. The third case study is a financial portfolio analysis application that engages you with time series analysis - pivotal to many data science applications today. The fourth industry use case dives you into graph algorithms and the power of programming in modern data science. You'll wrap up with a thoughtful look at the future of data science and how it will harness the power of algorithms and artificial intelligence. What you will learn  
A new toolset that has been carefully crafted to meet for your data analysis challenges  
Full and detailed case studies of the toolset across several of today's key industry contexts  
Become super productive with a new toolset across Python and Jupyter Notebook  
Look into the future of data science and which directions to develop your skills next  
Who this book is for  
This book is for developers wanting to bridge the gap between them and data scientists.

Introducing PixieDust from its creator, the book is a great desk companion for the accomplished Data Scientist. Some fluency in data interpretation and visualization is assumed. It will be helpful to have some knowledge of Python, using Python libraries, and

some proficiency in web development.

**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

**Building Python Web APIs with FastAPI** - Abdulazeez

Abdulazeez Adeshina 2022-07-29

Discover FastAPI features and best practices for building and deploying high-quality web APIs from scratch Key Features • A practical guide to developing production-ready web APIs rapidly in Python • Learn how to put FastAPI into practice by implementing it in real-world scenarios • Explore FastAPI, its syntax, and configurations for deploying applications Book

Description RESTful web services are commonly used to create APIs for web-based applications owing to their light weight and high scalability. This book will show you how FastAPI, a high-performance web framework for building RESTful APIs in Python, allows you to build robust web APIs that are simple and intuitive and makes it easy to build quickly with very little boilerplate code. This book will help you set up a FastAPI application in no time and show you how to use FastAPI to build a REST API that receives and responds to user requests. You'll go on to learn how to handle routing and authentication while working with databases in a FastAPI application. The book walks you through the four key areas: building and using routes for create, read, update, and delete (CRUD) operations; connecting the application to SQL and NoSQL databases; securing the application built; and deploying your application locally or to a cloud environment. By the end of this book, you'll have developed a solid understanding of the FastAPI framework and be able to build and deploy robust REST APIs. What you will learn • Set up a FastAPI application that is fully functional and secure • Understand how to handle errors from requests and send proper responses in FastAPI • Integrate and connect your application to a SQL and NoSQL (MongoDB) database • Perform CRUD operations using SQL and FastAPI • Manage concurrency in FastAPI applications • Implement authentication in a FastAPI application • Deploy a FastAPI application to any platform Who this book is for This book is for Python developers who want to learn FastAPI in a pragmatic way to create robust web APIs with ease. If you are a Django or Flask developer looking to try something new that's faster, more efficient, and produces fewer bugs, this FastAPI Python book is for you. The book assumes intermediate-level knowledge of Python programming.

**Python Projects** - Laura Cassell 2014-11-24

A guide to completing Python projects for those ready to take their skills to the next level Python Projects is the ultimate resource for the Python programmer with basic skills who is ready to move beyond tutorials and start building projects. The preeminent guide to bridge the gap between learning and doing, this book walks readers through the "where" and "how" of real-world

Python programming with practical, actionable instruction. With a focus on real-world functionality, Python Projects details the ways that Python can be used to complete daily tasks and bring efficiency to businesses and individuals alike. Python Projects is written specifically for those who know the Python syntax and lay of the land, but may still be intimidated by larger, more complex projects. The book provides a walk-through of the basic set-up for an application and the building and packaging for a library, and explains in detail the functionalities related to the projects. Topics include: \*How to maximize the power of the standard library modules \*Where to get third party libraries, and the best practices for utilization \*Creating, packaging, and reusing libraries within and across projects \*Building multi-layered functionality including networks, data, and user interfaces \*Setting up development environments and using virtualenv, pip, and more Written by veteran Python trainers, the book is structured for easy navigation and logical progression that makes it ideal for individual, classroom, or corporate training. For Python developers looking to apply their skills to real-world challenges, Python Projects is a goldmine of information and expert insight.

**A Hands-On Introduction to Machine Learning** - Chirag

Shah 2022-12-31

Packed with real-world examples, industry insights and practical activities, this textbook is designed to teach machine learning in a way that is easy to understand and apply. It assumes only a basic knowledge of technology, making it an ideal resource for students and professionals, including those who are new to computer science. All the necessary topics are covered, including supervised and unsupervised learning, neural networks, reinforcement learning, cloud-based services, and the ethical issues still posing problems within the industry. While Python is used as the primary language, many exercises will also have the solutions provided in R for greater versatility. A suite of online resources is available to support teaching across a range of different courses, including example syllabi, a solutions manual, and lecture slides. Datasets and code are also available online for students, giving them everything they need to practice the examples and problems in the book.

**AWS Lambda** - Mike Chapin 2017

3.5 Hours of Video Instruction on AWS Lambda and Serverless Applications Overview More than 3.5 hours of practical video instruction on AWS Lambda--Amazon's Functions-as-a-Service technology--and how to build Serverless applications. The aim throughout this course is not to give you just cookie cutter examples but instead to give you a thorough understanding of the Lambda platform and programming model, so you'll have confidence building your own Serverless applications. Description Serverless is a new cloud computing approach to architecting and building applications. It enables faster delivery of business value and reduced operational cost and complexity, together with virtually limitless and effortless scaling. The core technology class of a Serverless architecture is Functions-as-a-Service, and the most mature Functions-as-a-Service product is Lambda, from Amazon Web Services. AWS Lambda LiveLessons is designed to give you a thorough understanding of the Lambda platform and programming model, so you'll have confidence building your own Serverless applications. Although AWS Lambda natively supports several languages, including Javascript, Python and C#, this video tutorial uses Java and its Java Virtual Machine as the development language and runtime for all examples. The video starts off by introducing Serverless and answering the question, "What is Lambda?" It explains Serverless fundamentals and compares the different Serverless technology classes of Backend-as-a-

Service and Functions-as-a-Service, as well as the benefits and limitations of Serverless. Next, Roberts and Chapin review the necessary environment prerequisites before showing you how to code and execute your first Lambda function. They then drill down into some details of the Lambda model and show you how to build a Lambda-backed web application using API Gateway. Finally, the course covers some additional theory to give you a more advanced understanding of AWS Lambda. Roberts and Chapin close by looking more holistically at Serverless architectures and providing a detailed overview of Serverless technology beyond AWS Lambda, including a range of examples of how Serverless architectures are built in the real world. AWS Lambda LiveLessons consists of seven lessons totaling more than 4 hours of instruction. The videos feature easy-to-understand explanations of key concepts, realistic examples, and demonstrations of industrial-grade deployments. View the link resources...

**Python for Bioinformatics** - Sebastian Bassi 2017-08-07  
In today's data driven biology, programming knowledge is essential in turning ideas into testable hypothesis. Based on the author's extensive experience, Python for Bioinformatics, Second Edition helps biologists get to grips with the basics of software development. Requiring no prior knowledge of programming-related concepts, the book focuses on the easy-to-use, yet powerful, Python computer language. This new edition is updated throughout to Python 3 and is designed not just to help scientists master the basics, but to do more in less time and in a reproducible way. New developments added in this edition include NoSQL databases, the Anaconda Python distribution, graphical libraries like Bokeh, and the use of Github for collaborative development.

**Practical Java Programming for IoT, AI, and Blockchain** - Perry Xiao 2019-07-02  
Learn practical uses for some of the hottest tech applications trending among technology professionals We are living in an era of digital revolution. On the horizon, many emerging digital technologies are being developed at a breathtaking speed. Whether we like it or not, whether we are ready or not, digital technologies are going to penetrate more and more, deeper and deeper, into every aspect of our lives. This is going to fundamentally change how we live, how we work, and how we socialize. Java, as a modern high-level programming language, is an excellent tool for helping us to learn these digital technologies, as well as to develop digital applications, such as IoT, AI, Cybersecurity, Blockchain and more. Practical Java Programming uses Java as a tool to help you learn these new digital technologies and to be better prepared for the future changes. Gives you a brief overview for getting started with Java Programming Dives into how you can apply your new knowledge to some of the biggest trending applications today Helps you understand how to program Java to interact with operating systems, networking, and mobile applications Shows you how Java can be used in trending tech applications such as IoT (Internet of Things), AI (Artificial Intelligence), Cybersecurity, and Blockchain Get ready to find out firsthand how Java can be used for connected home devices, healthcare, the cloud, and all the hottest tech applications.

**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 **Hands-On Transfer Learning with Python** - Dipanjan Sarkar 2018-08-31

Deep learning simplified by taking supervised, unsupervised, and reinforcement learning to the next level using the Python ecosystem Key Features Build deep learning models with transfer learning principles in Python implement transfer learning to solve real-world research problems Perform complex operations such as image captioning neural style transfer Book Description Transfer learning is a machine learning (ML) technique where knowledge gained during training a set of problems can be used to solve other similar problems. The purpose of this book is two-fold; firstly, we focus on detailed coverage of deep learning (DL) and transfer learning, comparing and contrasting the two with easy-to-follow concepts and examples. The second area of focus is real-world examples and research problems using TensorFlow, Keras, and the Python ecosystem with hands-on examples. The book starts with the key essential concepts of ML and DL, followed by depiction and coverage of important DL architectures such as convolutional neural networks (CNNs), deep neural networks (DNNs), recurrent neural networks (RNNs), long short-term memory (LSTM), and capsule networks. Our focus then shifts to transfer learning concepts, such as model freezing, fine-tuning, pre-trained models including VGG, inception, ResNet, and how these systems perform better than DL models with practical examples. In the concluding chapters, we will focus on a multitude of real-world case studies and problems associated with areas such as computer vision, audio analysis and natural language processing (NLP). By the end of this book, you will be able to implement both DL and transfer learning principles in your own systems. What you will learn Set up your own DL environment with graphics processing unit (GPU) and Cloud support Delve into transfer learning principles with ML and DL models Explore various DL architectures, including CNN, LSTM, and capsule networks Learn about data and network representation and loss functions Get to grips with

models and strategies in transfer learning Walk through potential challenges in building complex transfer learning models from scratch Explore real-world research problems related to computer vision and audio analysis Understand how transfer learning can be leveraged in NLP Who this book is for Hands-On Transfer Learning with Python is for data scientists, machine learning engineers, analysts and developers with an interest in data and applying state-of-the-art transfer learning methodologies to solve tough real-world problems. Basic proficiency in machine learning and Python is required. [Mastering Large Datasets with Python](#) - John Wolohan 2020-01-15

Summary Modern data science solutions need to be clean, easy to read, and scalable. In [Mastering Large Datasets with Python](#), author J.T. Wolohan teaches you how to take a small project and scale it up using a functionally influenced approach to Python coding. You'll explore methods and built-in Python tools that lend themselves to clarity and scalability, like the high-performing parallelism method, as well as distributed technologies that allow for high data throughput. The abundant hands-on exercises in this practical tutorial will lock in these essential skills for any large-scale data science project. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Programming techniques that work well on laptop-sized data can slow to a crawl—or fail altogether—when applied to massive files or distributed datasets. By mastering the powerful map and reduce paradigm, along with the Python-based tools that support it, you can write data-centric applications that scale efficiently without requiring codebase rewrites as your requirements change. About the book [Mastering Large Datasets with Python](#) teaches you to write code that can handle datasets of any size. You'll start with laptop-sized datasets that teach you to parallelize data analysis by breaking large tasks into smaller ones that can run simultaneously. You'll then scale those same programs to industrial-sized datasets on a cluster of cloud servers. With the map and reduce paradigm firmly in place, you'll explore tools like Hadoop and PySpark to efficiently process massive distributed datasets, speed up decision-making with machine learning, and simplify your data storage with AWS S3. What's inside An introduction to the map and reduce paradigm Parallelization with the multiprocessing module and pathos framework Hadoop and Spark for distributed computing Running AWS jobs to process large datasets About the reader For Python programmers who need to work faster with more data. About the author J. T. Wolohan is a lead data scientist at Booz Allen Hamilton, and a PhD researcher at Indiana University, Bloomington. Table of Contents: PART 1 1 | Introduction 2 | Accelerating large dataset work: Map and parallel computing 3 | Function pipelines for mapping complex transformations 4 | Processing large datasets with lazy workflows 5 | Accumulation operations with reduce 6 | Speeding up map and reduce with advanced parallelization PART 2 7 | Processing truly big datasets with Hadoop and Spark 8 | Best practices for large data with Apache Streaming and mrjob 9 | PageRank with map and reduce in PySpark 10 | Faster decision-making with machine learning and PySpark PART 3 11 | Large datasets in the cloud with Amazon Web Services and S3 12 | MapReduce in the cloud with Amazon's Elastic MapReduce

[Long Short-Term Memory Networks With Python](#) - Jason Brownlee 2017-07-20

The Long Short-Term Memory network, or LSTM for short, is a type of recurrent neural network that achieves state-of-the-art results on challenging prediction problems. In this laser-focused Ebook, finally cut through the math, research papers and patchwork descriptions about LSTMs. Using clear explanations, standard Python libraries and step-by-step tutorial

lessons you will discover what LSTMs are, and how to develop a suite of LSTM models to get the most out of the method on your sequence prediction problems.

[Machine Learning Engineering with Python](#) - Andrew P. McMahon 2021-11-05

Supercharge the value of your machine learning models by building scalable and robust solutions that can serve them in production environments Key Features Explore hyperparameter optimization and model management tools Learn object-oriented programming and functional programming in Python to build your own ML libraries and packages Explore key ML engineering patterns like microservices and the Extract Transform Machine Learn (ETML) pattern with use cases Book Description Machine learning engineering is a thriving discipline at the interface of software development and machine learning. This book will help developers working with machine learning and Python to put their knowledge to work and create high-quality machine learning products and services. [Machine Learning Engineering with Python](#) takes a hands-on approach to help you get to grips with essential technical concepts, implementation patterns, and development methodologies to have you up and running in no time. You'll begin by understanding key steps of the machine learning development life cycle before moving on to practical illustrations and getting to grips with building and deploying robust machine learning solutions. As you advance, you'll explore how to create your own toolsets for training and deployment across all your projects in a consistent way. The book will also help you get hands-on with deployment architectures and discover methods for scaling up your solutions while building a solid understanding of how to use cloud-based tools effectively. Finally, you'll work through examples to help you solve typical business problems. By the end of this book, you'll be able to build end-to-end machine learning services using a variety of techniques and design your own processes for consistently performant machine learning engineering. What you will learn Find out what an effective ML engineering process looks like Uncover options for automating training and deployment and learn how to use them Discover how to build your own wrapper libraries for encapsulating your data science and machine learning logic and solutions Understand what aspects of software engineering you can bring to machine learning Gain insights into adapting software engineering for machine learning using appropriate cloud technologies Perform hyperparameter tuning in a relatively automated way Who this book is for This book is for machine learning engineers, data scientists, and software developers who want to build robust software solutions with machine learning components. If you're someone who manages or wants to understand the production life cycle of these systems, you'll find this book useful. Intermediate-level knowledge of Python is necessary.

[Practical MLOps](#) - Noah Gift 2021-09-14

Getting your models into production is the fundamental challenge of machine learning. [MLOps](#) offers a set of proven principles aimed at solving this problem in a reliable and automated way. This insightful guide takes you through what [MLOps](#) is (and how it differs from DevOps) and shows you how to put it into practice to operationalize your machine learning models. Current and aspiring machine learning engineers--or anyone familiar with data science and Python--will build a foundation in [MLOps](#) tools and methods (along with AutoML and monitoring and logging), then learn how to implement them in AWS, Microsoft Azure, and Google Cloud. The faster you deliver a machine learning system that works, the faster you can focus on the business problems you're trying to crack. This book gives you a head start. You'll discover how to: Apply DevOps best practices to machine learning Build production machine learning systems and maintain them Monitor, instrument, load-

test, and operationalize machine learning systems Choose the correct MLOps tools for a given machine learning task Run machine learning models on a variety of platforms and devices, including mobile phones and specialized hardware

**Learn TensorFlow in 24 Hours** - Alex Nordeen 2020-10-31  
Tensorflow is the most popular Deep Learning Library out there. It has fantastic graph computations feature which helps data scientist to visualize his designed neural network using TensorBoard. This Machine learning library supports both Convolution as well as Recurrent Neural network. It supports parallel processing on CPU as well as GPU. Prominent machine learning algorithms supported by TensorFlow are Deep Learning Classification, wibe & deep, Boston Tree amongst others. The book is very hands-on and gives you industry ready deep learnings practices. Here is what is covered in the book – Table Of Content Chapter 1: What is Deep learning? Chapter 2: Machine Learning vs Deep Learning Chapter 3: What is TensorFlow? Chapter 4: Comparison of Deep Learning Libraries Chapter 5: How to Download and Install TensorFlow Windows and Mac Chapter 6: Jupyter Notebook Tutorial Chapter 7: Tensorflow on AWS Chapter 8: TensorFlow Basics: Tensor, Shape, Type, Graph, Sessions & Operators Chapter 9: Tensorboard: Graph Visualization with Example Chapter 10: NumPy Chapter 11: Pandas Chapter 12: Scikit-Learn Chapter 13: Linear Regression Chapter 14: Linear Regression Case Study Chapter 15: Linear Classifier in TensorFlow Chapter 16: Kernel Methods Chapter 17: TensorFlow ANN (Artificial Neural Network) Chapter 18: ConvNet(Convolutional Neural Network): TensorFlow Image Classification Chapter 19: Autoencoder with TensorFlow Chapter 20: RNN(Recurrent Neural Network) TensorFlow

*AWS Certified Developer - Associate (DVA-C01) Cert Guide* - Marko Sluga 2020-04-30

Learn, prepare, and practice for AWS Certified Developer – Associate (DVA-C01) exam success with this Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Explore the AWS Certified Developer - Associate (DVA-C01) exam topics as defined in the latest official exam objectives from Amazon Pre-test your knowledge before each chapter with core concept quizzes Assess your knowledge and retention with chapter-ending quizzes Review key concepts with exam preparation tasks Practice with realistic exam questions covering the entire body of exam objectives Learn from more than one hour of video mentoring AWS Certified Developer – Associate (DVA-C01) Cert Guide is a best-of-breed exam study guide. Best-selling author and expert instructor Marko Sluga shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. End-of-chapter quizzes help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. The companion website contains the powerful Pearson Test Prep practice test software, complete with hundreds of exam-realistic questions. The assessment engine offers you a wealth of customization options and reporting features, laying out a complete assessment of your knowledge to help you focus your study where it is needed most. The companion website also contains more than one hour of personal video mentoring from the author. Well regarded for its level of detail, assessment features, and challenging quizzes, this study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time.

The study guide helps you master all the topics on the AWS Certified Developer – Associate (DVA-C01) exam, including: Deployment: CLI, SDKs, CI/CD pipelines, CloudFormation, Elastic Beanstalk, deployment/provisioning processes and patterns, serverless design, and more Security: Authentication via AWS CLI and SDKs; IAM users, groups, roles, and policies; IAM federation with external directories and identity providers; security groups and NACLs Development with AWS services: Implementing designs in code; interacting with infrastructure via AWS CLI, SDKs, and APIs; DevOps approaches and Code tools Refactoring: AWS data transfer, transport, and transform tools; managed AWS services for refactoring new or migrated applications Monitoring and troubleshooting: CloudWatch data capture and analysis; application problem solving, scaling, and optimization; CloudTrail tracing and auditing; and more Companion Website: The website contains two free, complete practice exams and more than one hour of video training. Includes Exclusive Offer for up to 80% Off Premium Edition eBook and Practice Test and Video Training. Pearson Test Prep online system requirements: Browsers: Chrome version 73 and above; Safari version 12 and above; Microsoft Edge 44 and above. Devices: Desktop and laptop computers, tablets running on Android v8.0 and iOS v13, smartphones with a minimum screen size of 4.7". Internet access required. Pearson Test Prep offline system requirements: Windows 10, Windows 8.1; Microsoft .NET Framework 4.5 Client; Pentium-class 1 GHz processor (or equivalent); 512 MB RAM; 650 MB disk space plus 50 MB for each downloaded practice exam; access to the Internet to register and download exam databases

*Aws* - Richard Connor 2019-11-29

Unleash the full potential of your applications and services and take your business to the next level with this definitive guide to AWS, the world's number one cloud platform! Do you want to learn how you can harness the power of cloud computing in your apps, but don't know where to begin? If you answered Yes, then this book is for you!

*Adversarial Tradecraft in Cybersecurity* - Dan Borges 2021-06-14

Master cutting-edge techniques and countermeasures to protect your organization from live hackers. Learn how to harness cyber deception in your operations to gain an edge over the competition. Key FeaturesGain an advantage against live hackers in a competition or real computing environmentUnderstand advanced red team and blue team techniques with code examplesLearn to battle in short-term memory, whether remaining unseen (red teams) or monitoring an attacker's traffic (blue teams)Book Description Little has been written about what to do when live hackers are on your system and running amok. Even experienced hackers tend to choke up when they realize the network defender has caught them and is zoning in on their implants in real time. This book will provide tips and tricks all along the kill chain of an attack, showing where hackers can have the upper hand in a live conflict and how defenders can outsmart them in this adversarial game of computer cat and mouse. This book contains two subsections in each chapter, specifically focusing on the offensive and defensive teams. It begins by introducing you to adversarial operations and principles of computer conflict where you will explore the core principles of deception, humanity, economy, and more about human-on-human conflicts. Additionally, you will understand everything from planning to setting up infrastructure and tooling that both sides should have in place. Throughout this book, you will learn how to gain an advantage over opponents by disappearing from what they can detect. You will further understand how to blend in, uncover other actors' motivations and means, and learn to tamper with them to hinder their ability to detect your presence.

Finally, you will learn how to gain an advantage through advanced research and thoughtfully concluding an operation. By the end of this book, you will have achieved a solid understanding of cyberattacks from both an attacker's and a defender's perspective. What you will learn Understand how to implement process injection and how to detect it Turn the tables on the offense with active defense Disappear on the defender's system, by tampering with defensive sensors Upskill in using deception with your backdoors and countermeasures including honeypots Kick someone else from a computer you are on and gain the upper hand Adopt a language agnostic approach to become familiar with techniques that can be applied to both the red and blue teams Prepare yourself for real-time cybersecurity conflict by using some of the best techniques currently in the industry Who this book is for Pentesters to red teamers, security operations center analysts to incident responders, attackers, defenders, general hackers, advanced computer users, and security engineers will benefit from this book. Participants in purple teaming or adversarial simulations will also learn a lot from its practical examples of processes for gaining an advantage over the opposing team. Basic knowledge of Python, Go, Bash, PowerShell, system administration as well as knowledge of incident response in Linux and prior exposure to any kind of cybersecurity knowledge, penetration testing, and ethical hacking basics will help you follow along.

*Python for DevOps* - Noah Gift 2020-02-04

Python for DevOps shows you how to harness Python for everyday Linux systems administration tasks, as well as today's most useful devops tools, including Docker, Kubernetes, and Terraform. Embrace automation and you'll never look at a boring task the same way again.

**Learn Amazon SageMaker** - Julien Simon 2021-11-26

Swiftly build and deploy machine learning models without managing infrastructure and boost productivity using the latest Amazon SageMaker capabilities such as Studio, Autopilot, Data Wrangler, Pipelines, and Feature Store Key Features Build, train, and deploy machine learning models quickly using Amazon SageMaker Optimize the accuracy, cost, and fairness of your models Create and automate end-to-end machine learning workflows on Amazon Web Services (AWS) Book Description Amazon SageMaker enables you to quickly build, train, and deploy machine learning models at scale without managing any infrastructure. It helps you focus on the machine learning problem at hand and deploy high-quality models by eliminating the heavy lifting typically involved in each step of the ML process. This second edition will help data scientists and ML developers to explore new features such as SageMaker Data Wrangler, Pipelines, Clarify, Feature Store, and much more. You'll start by learning how to use various capabilities of SageMaker as a single toolset to solve ML challenges and progress to cover features such as AutoML, built-in algorithms and frameworks, and writing your own code and algorithms to build ML models. The book will then show you how to integrate Amazon SageMaker with popular deep learning libraries, such as TensorFlow and PyTorch, to extend the capabilities of existing models. You'll also see how automating your workflows can help you get to production faster with minimum effort and at a lower cost. Finally, you'll explore SageMaker Debugger and SageMaker Model Monitor to detect quality issues in training and production. 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 learn Become well-versed with data annotation and preparation techniques Use AutoML features to build and train machine learning models with AutoPilot Create models using built-in algorithms and frameworks and your own code Train computer vision and natural language processing (NLP) models using real-world examples Cover

training techniques for scaling, model optimization, model debugging, and cost optimization Automate deployment tasks in a variety of configurations using SDK and several automation tools Who 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. A solid understanding of machine learning concepts and the Python programming language will also be beneficial.

*Machine Learning in Biotechnology and Life Sciences* - Saleh Alkhalifa 2022-01-28

Explore all the tools and templates needed for data scientists to drive success in their biotechnology careers with this comprehensive guide Key Features Learn the applications of machine learning in biotechnology and life science sectors Discover exciting real-world applications of deep learning and natural language processing Understand the general process of deploying models to cloud platforms such as AWS and GCP Book Description The booming fields of biotechnology and life sciences have seen drastic changes over the last few years. With competition growing in every corner, companies around the globe are looking to data-driven methods such as machine learning to optimize processes and reduce costs. This book helps lab scientists, engineers, and managers to develop a data scientist's mindset by taking a hands-on approach to learning about the applications of machine learning to increase productivity and efficiency in no time. You'll start with a crash course in Python, SQL, and data science to develop and tune sophisticated models from scratch to automate processes and make predictions in the biotechnology and life sciences domain. As you advance, the book covers a number of advanced techniques in machine learning, deep learning, and natural language processing using real-world data. By the end of this machine learning book, you'll be able to build and deploy your own machine learning models to automate processes and make predictions using AWS and GCP. What you will learn Get started with Python programming and Structured Query Language (SQL) Develop a machine learning predictive model from scratch using Python Fine-tune deep learning models to optimize their performance for various tasks Find out how to deploy, evaluate, and monitor a model in the cloud Understand how to apply advanced techniques to real-world data Discover how to use key deep learning methods such as LSTMs and transformers Who this book is for This book is for data scientists and scientific professionals looking to transcend to the biotechnology domain. Scientific professionals who are already established within the pharmaceutical and biotechnology sectors will find this book useful. A basic understanding of Python programming and beginner-level background in data science conjunction is needed to get the most out of this book.

**AWS For Admins For Dummies** - John Paul Mueller 2016-10-19

Easily get your head in the Cloud with Amazon Web Services With Amazon Web Services (AWS), you can do everything from backing up your personal hard drive to creating a full-fledged IT department in the Cloud. And while major corporations like Adobe and Netflix have turned to AWS for their Cloud computing needs, it isn't just for private companies. Amazon Web Services For Dummies is the singular resource that shows real people with real businesses how to use on-demand IT resources to help their companies grow. If you're like most people just getting their feet wet with this service, your first question is likely to be, "How do I get started with AWS?" This book answers that question—and a multitude more—in language you can understand and shows

you how to put this Cloud computing service to work for you right away. AWS is immense and, naturally, intimidating, but with the help of this book, you'll peel back its many layers in no time! Provides overviews that explain what tasks the services perform and how they relate to each other Offers specific paths to follow in order to obtain a particular installation result Gets you started without making a huge investment Reduces the risk of failure by ensuring you understand available options as part of the configuration and usage process Stop wasting time and resources on hardware and software that's quickly outdated. Get started with AWS today!

**NoSQL** - Ganesh Chandra Deka 2017-05-19

This book discusses the advanced databases for the cloud-based application known as NoSQL. It will explore the recent advancements in NoSQL database technology. Chapters on structured, unstructured and hybrid databases will be included to explore bigdata analytics, bigdata storage and processing. The book is likely to cover a wide range of topics such as cloud computing, social computing, bigdata and advanced databases processing techniques.

**AWS for Developers For Dummies** - John Paul Mueller 2017-07-28

Everything you need to get running with IaaS for Amazon Web Services Modern businesses rely on Infrastructure-as-a-Service (IaaS)—a setup in which someone else foots the bill to create application environments—and developers are expected to know how to write both platform-specific and IaaS-supported applications. If you're a developer who writes desktop and web applications but have little-to-no experience with cloud development, this book is an essential tool in getting started in the IaaS environment with Amazon Web Services. In Amazon Web Services For Developers For Dummies, you'll quickly and easily get up to speed on which language or platform will work best to meet a specific need, how to work with management consoles, ways you'll interact with services at the command line, how to create applications with the AWS API, and so much more. Assess development options to produce the kind of result that's actually needed Use the simplest approach to accomplish any given task Automate tasks using something as simple as the batch processing features offered by most platforms Create example applications using JavaScript, Python, and R Discover how to use the XML files that appear in the management console to fine tune your configuration Making sense of Amazon Web Services doesn't have to be as difficult as it seems—and this book shows you how.

**Deep Learning with TensorFlow 2 and Keras** - Antonio Gulli 2019-12-27

Build machine and deep learning systems with the newly released TensorFlow 2 and Keras for the lab, production, and mobile devices Key FeaturesIntroduces and then uses TensorFlow 2 and Keras right from the startTeaches key machine and deep learning techniquesUnderstand the fundamentals of deep learning and machine learning through clear explanations and extensive code samplesBook Description Deep Learning with TensorFlow 2 and Keras, Second Edition teaches neural networks and deep learning techniques alongside TensorFlow (TF) and Keras. You'll learn how to write deep learning applications in the most powerful, popular, and scalable machine learning stack available. TensorFlow is the machine learning library of choice for professional applications, while Keras offers a simple and powerful Python API for accessing TensorFlow. TensorFlow 2 provides full Keras integration, making advanced machine learning easier and more convenient than ever before. This book also introduces neural networks with TensorFlow, runs through the main applications (regression, ConvNets (CNNs), GANs, RNNs, NLP), covers two working example apps, and then dives into TF in

production, TF mobile, and using TensorFlow with AutoML. What you will learnBuild machine learning and deep learning systems with TensorFlow 2 and the Keras APIUse Regression analysis, the most popular approach to machine learningUnderstand ConvNets (convolutional neural networks) and how they are essential for deep learning systems such as image classifiersUse GANs (generative adversarial networks) to create new data that fits with existing patternsDiscover RNNs (recurrent neural networks) that can process sequences of input intelligently, using one part of a sequence to correctly interpret anotherApply deep learning to natural human language and interpret natural language texts to produce an appropriate responseTrain your models on the cloud and put TF to work in real environmentsExplore how Google tools can automate simple ML workflows without the need for complex modelingWho this book is for This book is for Python developers and data scientists who want to build machine learning and deep learning systems with TensorFlow. This book gives you the theory and practice required to use Keras, TensorFlow 2, and AutoML to build machine learning systems. Some knowledge of machine learning is expected.

**Learning AWS Lambda** - Markus Klems 2017

"Amazon Lambda is the part of Amazon Web Services that lets you run your code without provisioning or managing servers. Amazon Lambda is a compute service that enables you to deploy applications and back-end services that operate with zero upfront cost and require no system administration. This video tutorial will start with the basics of Amazon Lambda and will then walk you through combining Lambda with other Amazon Web Services, such as Amazon API Gateway Service, Amazon DynamoDB, and so on. Moving on, this tutorial will show you how to write, run, and test Lambda functions using Node.js, Java, Python, and C#. Moreover, you will learn how to use its serverless framework to increase your development productivity."--Resource description page.

**Building Serverless Python Web Services with Zappa** - Abdulwahid Abdulhaque Barguzar 2018-07-30

Master serverless architectures in Python and their implementation, with Zappa on three different frameworks. Key Features Scalable serverless Python web services using Django, Flask, and Pyramid. Learn Asynchronous task execution on AWS Lambda and scheduling using Zappa. Implementing Zappa in a Docker container. Book Description Serverless applications are becoming very popular these days, not just because they save developers the trouble of managing the servers, but also because they provide several other benefits such as cutting heavy costs and improving the overall performance of the application. This book will help you build serverless applications in a quick and efficient way. We begin with an introduction to AWS and the API gateway, the environment for serverless development, and Zappa. We then look at building, testing, and deploying apps in AWS with three different frameworks--Flask, Django, and Pyramid. Setting up a custom domain along with SSL certificates and configuring them with Zappa is also covered. A few advanced Zappa settings are also covered along with securing Zappa with AWS VPC. By the end of the book you will have mastered using three frameworks to build robust and cost-efficient serverless apps in Python. What you will learn Build, test, and deploy a simple web service using AWS CLI Integrate Flask-based Python applications, via AWS CLI configuration Design Rest APIs integrated with Zappa for Flask and Django Create a project in the Pyramid framework and configure it with Zappa Generate SSL Certificates using Amazon Certificate Manager Configure custom domains with AWS Route 53 Create a Docker container similar to AWS Lambda Who this book is for Python Developers who are interested in learning how to develop fast and highly scalable serverless applications in Python, will find this book useful



Artificial Intelligence Programming with Python - Perry Xiao 2022-02-21

A hands-on roadmap to using Python for artificial intelligence programming In Practical Artificial Intelligence Programming with Python: From Zero to Hero, veteran educator and photophysicist Dr. Perry Xiao delivers a thorough introduction to one of the most exciting areas of computer science in modern history. The book demystifies artificial intelligence and teaches readers its fundamentals from scratch in simple and plain language and with illustrative code examples. Divided into three parts, the author explains artificial intelligence generally, machine learning, and deep learning. It tackles a wide variety of useful topics, from classification and regression in machine learning to generative adversarial networks. He also includes: Fulsome introductions to MATLAB, Python, AI, machine learning, and deep learning Expansive discussions on supervised and unsupervised machine learning, as well as semi-supervised learning Practical AI and Python "cheat sheet" quick references This hands-on AI programming guide is perfect for anyone with a basic knowledge of programming—including familiarity with variables, arrays, loops, if-else statements, and file input and output—who seeks to understand foundational concepts in AI and AI development.

**Actionable Insights with Amazon QuickSight** - Manos Samatas 2022-01-28

Build interactive dashboards and storytelling reports at scale with the cloud-native BI tool that integrates embedded analytics and ML-powered insights effortlessly Key Features Explore Amazon QuickSight, manage data sources, and build and share dashboards Learn best practices from an AWS certified big data solutions architect Manage and monitor dashboards using the QuickSight API and other AWS services such as Amazon CloudTrail Book Description Amazon Quicksight is an exciting new visualization that rivals PowerBI and Tableau, bringing several exciting features to the table – but sadly, there aren't many resources out there that can help you learn the ropes. This book seeks to remedy that with the help of an AWS-certified expert who will help you leverage its full capabilities. After learning QuickSight's fundamental concepts and how to configure data sources, you'll be introduced to the main analysis-building functionality of QuickSight to develop visuals and dashboards, and explore how to develop and share interactive dashboards with parameters and on-screen controls. You'll dive into advanced filtering options with URL actions before learning how to set up alerts and scheduled reports. Next, you'll familiarize yourself with the types of insights before getting to grips with adding ML insights such as forecasting capabilities, analyzing time series data, adding narratives, and outlier detection to your dashboards. You'll also explore patterns to automate operations and look closer into the API actions that allow us to control settings. Finally, you'll learn advanced topics such as embedded dashboards and multitenancy. By the end of this book, you'll be well-versed with QuickSight's BI and analytics functionalities that will help you create BI apps with ML capabilities. What you will learn Understand the wider AWS analytics ecosystem and how QuickSight fits within it Set up and configure data sources with Amazon QuickSight Include custom controls and add interactivity to your BI application using parameters Add ML insights such as forecasting, anomaly detection, and narratives Explore patterns to automate operations using QuickSight APIs Create interactive dashboards and storytelling with Amazon QuickSight Design an embedded multi-tenant analytics architecture Focus on data permissions and how to manage Amazon QuickSight operations Who this book is for This book is for business intelligence (BI) developers and data analysts who are looking to create interactive dashboards using data from

Lake House on AWS with Amazon QuickSight. It will also be useful for anyone who wants to learn Amazon QuickSight in depth using practical, up-to-date examples. You will need to be familiar with general data visualization concepts before you get started with this book, however, no prior experience with Amazon QuickSight is required.

**Mastering Django** - Sufyan bin Uzayr 2022-10-25

Mastering Django helps the reader master the powerful Django framework for Python for creating dynamic applications and projects. Django is a high-level, open-source Python web framework created to help web developers achieve tight deadlines while also meeting a variety of needs. The primary feature of Django that makes it so popular among developers is that it promotes rapid development while providing a consistent and realistic design. Django is a complete toolkit with a basic code architecture and highly adaptable architecture that promotes rapid development – it can shape and pace your web app concept and see it through to launch in a matter of hours. Django's simplicity, stability, scalability, and flexibility are unmatched. It is currently a vibrant, collaborative open source project with thousands of users and contributors. Django is a versatile framework capable of developing any website. Robust design, rapid software development, fantastic documentation and tutorials, a vast community with readymade solutions, reasonably easy learning curve, and a high degree of clarity and readability are all hallmarks of this popular web framework. Django has carved out a niche for itself in the industry over the years, and appropriately so. Many popular apps use Django as their secret ingredient. Django has many features and can accommodate any modern web application. If you wish to build a successful career in web development, learning Django is a wise choice. With Mastering Django, learning the Django framework becomes a charm, and will help readers undoubtedly advance their careers. About the Series The Mastering Computer Science covers a wide range of topics, spanning programming languages as well as modern-day technologies and frameworks. The series has a special focus on beginner-level content, and is presented in an easy to understand manner, comprising: Crystal-clear text, spanning various topics sorted by relevance, Special focus on practical exercises, with numerous code samples and programs, A guided approach to programming, with step by step tutorials for the absolute beginners, Keen emphasis on real-world utility of skills, thereby cutting the redundant and seldom-used concepts and focusing instead of industry-prevalent coding paradigm, A wide range of references and resources, to help both beginner and intermediate-level developers gain the most out of the books. Mastering Computer Science series of books start from the core concepts, and then quickly move on to industry-standard coding practices, to help learners gain efficient and crucial skills in as little time as possible. The books assume no prior knowledge of coding, so even the absolute newbie coders can benefit from this series. Mastering Computer Science series is edited by Sufyan bin Uzayr, a writer and educator with over a decade of experience in the computing field.

**The Definitive Guide to AWS Infrastructure Automation** - Bradley Campbell 2019-12-06

Discover the pillars of AWS infrastructure automation, starting with API-driven infrastructure concepts and its immediate benefits such as increased agility, automation of the infrastructure life cycle, and flexibility in experimenting with new architectures. With this base established, the book discusses infrastructure-as-code concepts in a general form, establishing principled outcomes such as security and reproducibility. Inescapably, we delve into how these concepts enable and underpin the DevOps movement. The Definitive Guide to AWS Infrastructure Automation begins by discussing

services and tools that enable infrastructure-as-code solutions; first stop: AWS's CloudFormation service. You'll then cover the ever-expanding ecosystem of tooling emerging in this space, including CloudFormation wrappers such as Troposphere and orchestrators such as Sceptre, to completely independent third-party tools such as Terraform and Pulumi. As a bonus, you'll also work with AWS' newly-released CDK (Cloud Development Kit). You'll then look at how to implement modular, robust, and extensible solutions across a few examples - in the process building out each solution with several different tools to compare and contrast the strengths and weaknesses of each. By the end of the journey, you will have gained a wide knowledge of both the AWS-provided and third-party ecosystem of infrastructure-as-code/provisioning tools, and the strengths and weaknesses of each. You'll possess a mental framework for how to craft an infrastructure-as-code solution to solve future problems based on examples discussed throughout the book. You'll also have a demonstrable understanding of the hands-on operation of each tool, situational appropriateness of each tool, and how to leverage the tool day to day. What You Will Learn Discover the technological and organizational benefits to infrastructure-as-code solutions Examine the overall landscape of infrastructure-as-code tooling and solutions available to consumers of AWS services See the strengths and weaknesses of these tools relative to one another as examined through hands-on implementation of several solutions Gain hands-on experience, best practices, and tips and tricks learned through several years' real-world experience delivering solutions using these very tools in a wide variety of scenarios Engineer solid solutions that leave room for new requirements and changes without requiring needless refactoring Who This Book Is For DevOps engineers, cloud engineers and architects focused on the AWS ecosystem, software engineers/developers working within the AWS ecosystem, and engineering leaders looking for best practices. Effective Amazon Machine Learning - Alexis Perrier 2017-04-25 Learn to leverage Amazon's powerful platform for your predictive analytics needs About This Book Create great machine learning models that combine the power of

algorithms with interactive tools without worrying about the underlying complexity Learn the What's next? of machine learning-machine learning on the cloud-with this unique guide Create web services that allow you to perform affordable and fast machine learning on the cloud Who This Book Is For This book is intended for data scientists and managers of predictive analytics projects; it will teach beginner- to advanced-level machine learning practitioners how to leverage Amazon Machine Learning and complement their existing Data Science toolbox. No substantive prior knowledge of Machine Learning, Data Science, statistics, or coding is required. What You Will Learn Learn how to use the Amazon Machine Learning service from scratch for predictive analytics Gain hands-on experience of key Data Science concepts Solve classic regression and classification problems Run projects programmatically via the command line and the Python SDK Leverage the Amazon Web Service ecosystem to access extended data sources Implement streaming and advanced projects In Detail Predictive analytics is a complex domain requiring coding skills, an understanding of the mathematical concepts underpinning machine learning algorithms, and the ability to create compelling data visualizations. Following AWS simplifying Machine learning, this book will help you bring predictive analytics projects to fruition in three easy steps: data preparation, model tuning, and model selection. This book will introduce you to the Amazon Machine Learning platform and will implement core data science concepts such as classification, regression, regularization, overfitting, model selection, and evaluation. Furthermore, you will learn to leverage the Amazon Web Service (AWS) ecosystem for extended access to data sources, implement realtime predictions, and run Amazon Machine Learning projects via the command line and the Python SDK. Towards the end of the book, you will also learn how to apply these services to other problems, such as text mining, and to more complex datasets. Style and approach This book will include use cases you can relate to. In a very practical manner, you will explore the various capabilities of Amazon Machine Learning services, allowing you to implementing them in your environment with consummate ease.