

# Dialogflow

Yeah, reviewing a book **Dialogflow** could mount up your close links listings. This is just one of the solutions for you to be successful. As understood, carrying out does not recommend that you have astonishing points.

Comprehending as capably as promise even more than supplementary will have the funds for each success. neighboring to, the proclamation as with ease as sharpness of this Dialogflow can be taken as with ease as picked to act.

Digital Technologies and Applications - Saad Motahhir 2022-05-07

This book presents Volume 1 of selected research papers presented at the Second International Conference on Digital Technologies and Applications (ICDTA 22), held at Sidi Mohamed Ben Abdellah University, Fez, Morocco, on January 28-29, 2022. This book highlights the latest innovations in digital technologies as: artificial intelligence, Internet of Things, embedded systems, network technology, information processing and their applications in several areas as hybrid vehicles, renewable energy, mechatronics, medicine... This book will encourage and inspire researchers, industry professionals, and policymakers to put these methods into practice.

**15th International Conference on Soft Computing Models in Industrial and Environmental Applications (SOCO 2020)** - Álvaro Herrero 2020-08-28

This book contains accepted papers presented at SOCO 2020 conference held in the beautiful and historic city of Burgos (Spain), in September 2020. Soft computing represents a collection or set of computational techniques in machine learning, computer science and some engineering disciplines, which investigate, simulate, and analyze very complex issues and phenomena. After a through peer-review process, the SOCO 2020 International Program Committee selected 83 papers which are published in these conference proceedings and represents an acceptance rate of 35%. Due to the COVID-19 outbreak, the SOCO 2020 edition was blended, combining on-site and on-line participation. In this relevant edition a special emphasis was put on the organization of special sessions. Eleven special session were organized related to relevant topics such as: Soft Computing Applications in Precision Agriculture, Manufacturing and Management Systems, Management of Industrial and Environmental Enterprises, Logistics and Transportation Systems, Robotics and Autonomous Vehicles, Computer Vision, Laser-Based Sensing and Measurement and other topics such as Forecasting Industrial Time Series, IoT, Big Data and Cyber Physical Systems, Non-linear Dynamical Systems and Fluid Dynamics, Modeling and Control systems The selection of papers was extremely rigorous in order to maintain the high quality of SOCO conference editions and we would like to thank the members of the Program Committees for their hard work in the reviewing process. This is a crucial process to the creation of a high standard conference and the SOCO conference would not exist without their help.

**Conceptual Modeling** - Gillian Dobbie 2020-10-29

This book constitutes the refereed proceedings of the 39th International Conference on Conceptual Modeling, ER 2020, which was supposed to be held in Vienna, Austria, in November 2020, but the conference was held virtually due to the COVID-19 pandemic. The 28 full and 16 short papers were carefully reviewed and selected from 143 submissions. This events covers a wide range of topics, and the papers are organized in the following sessions: foundations of conceptual modeling; process mining and conceptual modeling; conceptual modeling of business rules and processes; modeling chatbots, narratives and natural language; ontology and conceptual modeling; applications of conceptual modeling; schema design, evolution, NoSQL; empirical studies of conceptual modeling; networks, graphs and conceptual modeling; and conceptual modeling of complex and data-rich systems.

Journey to Become a Google Cloud Machine Learning Engineer - Dr. Logan Song 2022-09-20

Prepare for the GCP ML certification exam along with exploring cloud computing and machine learning concepts and gaining Google Cloud ML skills Key FeaturesA comprehensive yet easy-to-follow Google Cloud machine learning study guideExplore full-spectrum and step-by-step practice examples to develop hands-on

skillsRead through and learn from in-depth discussions of Google ML certification exam questionsBook Description This book aims to provide a study guide to learn and master machine learning in Google Cloud: to build a broad and strong knowledge base, train hands-on skills, and get certified as a Google Cloud Machine Learning Engineer. The book is for someone who has the basic Google Cloud Platform (GCP) knowledge and skills, and basic Python programming skills, and wants to learn machine learning in GCP to take their next step toward becoming a Google Cloud Certified Machine Learning professional. The book starts by laying the foundations of Google Cloud Platform and Python programming, followed the by building blocks of machine learning, then focusing on machine learning in Google Cloud, and finally ends the studying for the Google Cloud Machine Learning certification by integrating all the knowledge and skills together. The book is based on the graduate courses the author has been teaching at the University of Texas at Dallas. When going through the chapters, the reader is expected to study the concepts, complete the exercises, understand and practice the labs in the appendices, and study each exam question thoroughly. Then, at the end of the learning journey, you can expect to harvest the knowledge, skills, and a certificate. What you will learnProvision Google Cloud services related to data science and machine learningProgram with the Python programming language and data science librariesUnderstand machine learning concepts and model development processesExplore deep learning concepts and neural networksBuild, train, and deploy ML models with Google BigQuery ML, Keras, and Google Cloud Vertex AIDiscover the Google Cloud ML Application Programming Interface (API)Prepare to achieve Google Cloud Professional Machine Learning Engineer certificationWho this book is for Anyone from the cloud computing, data analytics, and machine learning domains, such as cloud engineers, data scientists, data engineers, ML practitioners, and engineers, will be able to acquire the knowledge and skills and achieve the Google Cloud professional ML Engineer certification with this study guide. Basic knowledge of Google Cloud Platform and Python programming is required to get the most out of this book.

**Practical AI on the Google Cloud Platform** - Micheal Lanham 2020-10-20

Working with AI is complicated and expensive for many developers. That's why cloud providers have stepped in to make it easier, offering free (or affordable) state-of-the-art models and training tools to get you started. With this book, you'll learn how to use Google's AI-powered cloud services to do everything from creating a chatbot to analyzing text, images, and video. Author Micheal Lanham demonstrates methods for building and training models step-by-step and shows you how to expand your models to accomplish increasingly complex tasks. If you have a good grasp of math and the Python language, you'll quickly get up to speed with Google Cloud Platform, whether you want to build an AI assistant or a simple business AI application. Learn key concepts for data science, machine learning, and deep learning Explore tools like Video AI and AutoML Tables Build a simple language processor using deep learning systems Perform image recognition using CNNs, transfer learning, and GANs Use Google's Dialogflow to create chatbots and conversational AI Analyze video with automatic video indexing, face detection, and TensorFlow Hub Build a complete working AI agent application

Artificial Intelligence with Python - Alberto Artasanchez 2020-01-31

New edition of the bestselling guide to artificial intelligence with Python, updated to Python 3.x, with seven new chapters that cover RNNs, AI and Big Data, fundamental use cases, chatbots, and more. Key FeaturesCompletely updated and revised to Python 3.xNew chapters for AI on the cloud, recurrent neural networks, deep learning models, and feature selection and engineeringLearn more about deep learning

algorithms, machine learning data pipelines, and chatbots

**Book Description Artificial Intelligence with Python, Second Edition** is an updated and expanded version of the bestselling guide to artificial intelligence using the latest version of Python 3.x. Not only does it provide you an introduction to artificial intelligence, this new edition goes further by giving you the tools you need to explore the amazing world of intelligent apps and create your own applications. This edition also includes seven new chapters on more advanced concepts of Artificial Intelligence, including fundamental use cases of AI; machine learning data pipelines; feature selection and feature engineering; AI on the cloud; the basics of chatbots; RNNs and DL models; and AI and Big Data. Finally, this new edition explores various real-world scenarios and teaches you how to apply relevant AI algorithms to a wide swath of problems, starting with the most basic AI concepts and progressively building from there to solve more difficult challenges so that by the end, you will have gained a solid understanding of, and when best to use, these many artificial intelligence techniques. What you will learn

Understand what artificial intelligence, machine learning, and data science are

Explore the most common artificial intelligence use cases

Learn how to build a machine learning pipeline

Assimilate the basics of feature selection and feature engineering

Identify the differences between supervised and unsupervised learning

Discover the most recent advances and tools offered for AI development in the cloud

Develop automatic speech recognition systems and chatbots

Apply AI algorithms to time series data

Who this book is for

The intended audience for this book is Python developers who want to build real-world Artificial Intelligence applications. Basic Python programming experience and awareness of machine learning concepts and techniques is mandatory.

**Computational Intelligence, Communications, and Business Analytics** - Jyotsna Kumar Mandal 2019-06-25

The two volume set CCIS 1030 and 1031 constitutes the refereed proceedings of the Second International Conference on Computational Intelligence, Communications, and Business Analytics, CICBA 2018, held in Kalyani, India, in July 2018. The 76 revised full papers presented in the two volumes were carefully reviewed and selected from 240 submissions. The papers are organized in topical sections on computational intelligence; signal processing and communications; microelectronics, sensors, and intelligent networks; data science & advanced data analytics; intelligent data mining & data warehousing; and computational forensics (privacy and security).

**SCIENTIFIC BASES OF SOLVING OF THE MODERN TASKS** - 2020-06-01

Abstracts of XIX International Scientific and Practical Conference

**Building an Enterprise Chatbot** - Abhishek Singh 2019-09-13

Explore the adoption of chatbots in business by focusing on the design, deployment, and continuous improvement of chatbots in a business, with a single use-case from the banking and insurance sector. This book starts by identifying the business processes in the banking and insurance industry. This involves data collection from sources such as conversations from customer service centers, online chats, emails, and other NLP sources. You'll then design the solution architecture of the chatbot. Once the architecture is framed, the author goes on to explain natural language understanding (NLU), natural language processing (NLP), and natural language generation (NLG) with examples. In the next sections, you'll design and implement the backend framework of a typical chatbot from scratch. You will also explore some popular open-source chatbot frameworks such as Dialogflow and LUIS. The authors then explain how you can integrate various third-party services and enterprise databases with the custom chatbot framework. In the final section, you'll discuss how to deploy the custom chatbot framework on the AWS cloud. By the end of *Building an Enterprise Chatbot*, you will be able to design and develop an enterprise-ready conversational chatbot using an open source development platform to serve the end user. What You Will Learn

Identify business processes where chatbots could be used

Focus on building a chatbot for one industry and one use-case rather than building a ubiquitous and generic chatbot

Design the solution architecture for a chatbot

Integrate chatbots with internal data sources using APIs

Discover the differences between natural language understanding (NLU), natural language processing (NLP), and natural language generation (NLG)

Work with deployment and continuous improvement through representational learning

Who This Book Is For

Data scientists and enterprise architects who are currently looking to deploy chatbot solutions to their business.

**Knowledge Management in the Development of Data-Intensive Systems** - Ivan Mistrik 2021-06-15

Data-intensive systems are software applications that process and generate Big Data. Data-intensive systems support the use of large amounts of data strategically and efficiently to provide intelligence. For example, examining industrial sensor data or business process data can enhance production, guide proactive improvements of development processes, or optimize supply chain systems. Designing data-intensive software systems is difficult because distribution of knowledge across stakeholders creates a symmetry of ignorance, because a shared vision of the future requires the development of new knowledge that extends and synthesizes existing knowledge. *Knowledge Management in the Development of Data-Intensive Systems* addresses new challenges arising from knowledge management in the development of data-intensive software systems. These challenges concern requirements, architectural design, detailed design, implementation and maintenance. The book covers the current state and future directions of knowledge management in development of data-intensive software systems. The book features both academic and industrial contributions which discuss the role software engineering can play for addressing challenges that confront developing, maintaining and evolving systems; data-intensive software systems of cloud and mobile services; and the scalability requirements they imply. The book features software engineering approaches that can efficiently deal with data-intensive systems as well as applications and use cases benefiting from data-intensive systems. Providing a comprehensive reference on the notion of data-intensive systems from a technical and non-technical perspective, the book focuses uniquely on software engineering and knowledge management in the design and maintenance of data-intensive systems. The book covers constructing, deploying, and maintaining high quality software products and software engineering in and for dynamic and flexible environments. This book provides a holistic guide for those who need to understand the impact of variability on all aspects of the software life cycle. It leverages practical experience and evidence to look ahead at the challenges faced by organizations in a fast-moving world with increasingly fast-changing customer requirements and expectations.

**Practical Natural Language Processing** - Sowmya Vajjala 2020-06-17

Many books and courses tackle natural language processing (NLP) problems with toy use cases and well-defined datasets. But if you want to build, iterate, and scale NLP systems in a business setting and tailor them for particular industry verticals, this is your guide. Software engineers and data scientists will learn how to navigate the maze of options available at each step of the journey. Through the course of the book, authors Sowmya Vajjala, Bodhisattwa Majumder, Anuj Gupta, and Harshit Surana will guide you through the process of building real-world NLP solutions embedded in larger product setups. You'll learn how to adapt your solutions for different industry verticals such as healthcare, social media, and retail. With this book, you'll:

- Understand the wide spectrum of problem statements, tasks, and solution approaches within NLP
- Implement and evaluate different NLP applications using machine learning and deep learning methods
- Fine-tune your NLP solution based on your business problem and industry vertical
- Evaluate various algorithms and approaches for NLP product tasks, datasets, and stages
- Produce software solutions following best practices around release, deployment, and DevOps for NLP systems
- Understand best practices, opportunities, and the roadmap for NLP from a business and product leader's perspective

**Hands-On Explainable AI (XAI) with Python** - Denis Rothman 2020-07-31

Resolve the black box models in your AI applications to make them fair, trustworthy, and secure. Familiarize yourself with the basic principles and tools to deploy Explainable AI (XAI) into your apps and reporting interfaces. Key Features

- Learn explainable AI tools and techniques to process trustworthy AI results
- Understand how to detect, handle, and avoid common issues with AI ethics and bias
- Integrate fair AI into popular apps and reporting tools to deliver business value using Python and associated tools

**Book Description** Effectively translating AI insights to business stakeholders requires careful planning, design, and visualization choices. Describing the problem, the model, and the relationships among variables and their findings are often subtle, surprising, and technically complex. *Hands-On Explainable AI (XAI) with Python* will see you work with specific hands-on machine learning Python projects that are strategically arranged to enhance your grasp on AI results analysis. You will be building models, interpreting results with visualizations, and integrating XAI reporting tools and different applications. You will build XAI solutions in Python, TensorFlow 2, Google Cloud's XAI platform, Google Colaboratory, and other frameworks to open up the black box of machine learning models. The book will introduce you to several open-source XAI tools for

Python that can be used throughout the machine learning project life cycle. You will learn how to explore machine learning model results, review key influencing variables and variable relationships, detect and handle bias and ethics issues, and integrate predictions using Python along with supporting the visualization of machine learning models into user explainable interfaces. By the end of this AI book, you will possess an in-depth understanding of the core concepts of XAI. What you will learn Plan for XAI through the different stages of the machine learning life cycle Estimate the strengths and weaknesses of popular open-source XAI applications Examine how to detect and handle bias issues in machine learning data Review ethics considerations and tools to address common problems in machine learning data Share XAI design and visualization best practices Integrate explainable AI results using Python models Use XAI toolkits for Python in machine learning life cycles to solve business problems Who this book is for This book is not an introduction to Python programming or machine learning concepts. You must have some foundational knowledge and/or experience with machine learning libraries such as scikit-learn to make the most out of this book. Some of the potential readers of this book include: Professionals who already use Python for as data science, machine learning, research, and analysis Data analysts and data scientists who want an introduction into explainable AI tools and techniques AI Project managers who must face the contractual and legal obligations of AI Explainability for the acceptance phase of their applications

**Sustainable Communication Networks and Application** - P. Karuppusamy 2021-01-25

This book includes novel and state-of-the-art research discussions that articulate and report all research aspects, including theoretical and experimental prototypes and applications that incorporate sustainability into emerging applications. In recent years, sustainability and information and communication technologies (ICT) are highly intertwined, where sustainability resources and its management has attracted various researchers, stakeholders, and industrialists. The energy-efficient communication technologies have revolutionized the various smart applications like smart cities, healthcare, entertainment, and business. The book discusses and articulates emerging challenges in significantly reducing the energy consumption of communication systems and also explains development of a sustainable and energy-efficient mobile and wireless communication network. It includes best selected high-quality conference papers in different fields such as internet of things, cloud computing, data mining, artificial intelligence, machine learning, autonomous systems, deep learning, neural networks, renewable energy sources, sustainable wireless communication networks, QoS, network sustainability, and many other related areas.

**Artificial Intelligence By Example** - Denis Rothman 2020-02-28

Understand the fundamentals and develop your own AI solutions in this updated edition packed with many new examples Key Features AI-based examples to guide you in designing and implementing machine intelligence Build machine intelligence from scratch using artificial intelligence examples Develop machine intelligence from scratch using real artificial intelligence Book Description AI has the potential to replicate humans in every field. Artificial Intelligence By Example, Second Edition serves as a starting point for you to understand how AI is built, with the help of intriguing and exciting examples. This book will make you an adaptive thinker and help you apply concepts to real-world scenarios. Using some of the most interesting AI examples, right from computer programs such as a simple chess engine to cognitive chatbots, you will learn how to tackle the machine you are competing with. You will study some of the most advanced machine learning models, understand how to apply AI to blockchain and Internet of Things (IoT), and develop emotional quotient in chatbots using neural networks such as recurrent neural networks (RNNs) and convolutional neural networks (CNNs). This edition also has new examples for hybrid neural networks, combining reinforcement learning (RL) and deep learning (DL), chained algorithms, combining unsupervised learning with decision trees, random forests, combining DL and genetic algorithms, conversational user interfaces (CUI) for chatbots, neuromorphic computing, and quantum computing. By the end of this book, you will understand the fundamentals of AI and have worked through a number of examples that will help you develop your AI solutions. What you will learn Apply k-nearest neighbors (KNN) to language translations and explore the opportunities in Google Translate Understand chained algorithms combining unsupervised learning with decision trees Solve the XOR problem with feedforward neural networks (FNN) and build its architecture to represent a data flow graph Learn about meta learning models with hybrid neural networks Create a chatbot and optimize its emotional intelligence deficiencies with tools such as Small Talk

and data logging Building conversational user interfaces (CUI) for chatbots Writing genetic algorithms that optimize deep learning neural networks Build quantum computing circuits Who this book is for Developers and those interested in AI, who want to understand the fundamentals of Artificial Intelligence and implement them practically. Prior experience with Python programming and statistical knowledge is essential to make the most out of this book.

**Hands-On Python Deep Learning for the Web** - Anubhav Singh 2020-05-15

Use the power of deep learning with Python to build and deploy intelligent web applications Key Features Create next-generation intelligent web applications using Python libraries such as Flask and Django Implement deep learning algorithms and techniques for performing smart web automation Integrate neural network architectures to create powerful full-stack web applications Book Description When used effectively, deep learning techniques can help you develop intelligent web apps. In this book, you'll cover the latest tools and technological practices that are being used to implement deep learning in web development using Python. Starting with the fundamentals of machine learning, you'll focus on DL and the basics of neural networks, including common variants such as convolutional neural networks (CNNs). You'll learn how to integrate them into websites with the frontends of different standard web tech stacks. The book then helps you gain practical experience of developing a deep learning-enabled web app using Python libraries such as Django and Flask by creating RESTful APIs for custom models. Later, you'll explore how to set up a cloud environment for deep learning-based web deployments on Google Cloud and Amazon Web Services (AWS). Next, you'll learn how to use Microsoft's intelligent Emotion API, which can detect a person's emotions through a picture of their face. You'll also get to grips with deploying real-world websites, in addition to learning how to secure websites using reCAPTCHA and Cloudflare. Finally, you'll use NLP to integrate a voice UX through Dialogflow on your web pages. By the end of this book, you'll have learned how to deploy intelligent web apps and websites with the help of effective tools and practices. What you will learn Explore deep learning models and implement them in your browser Design a smart web-based client using Django and Flask Work with different Python-based APIs for performing deep learning tasks Implement popular neural network models with TensorFlow.js Design and build deep web services on the cloud using deep learning Get familiar with the standard workflow of taking deep learning models into production Who this book is for This deep learning book is for data scientists, machine learning practitioners, and deep learning engineers who are looking to perform deep learning techniques and methodologies on the web. You will also find this book useful if you're a web developer who wants to implement smart techniques in the browser to make it more interactive. Working knowledge of the Python programming language and basic machine learning techniques will be beneficial.

**Advanced Information Systems Engineering** - Paolo Giorgini 2019-05-28

This book constitutes the refereed proceedings of the 31st International Conference on Advanced Information Systems Engineering, CAiSE 2019, held in Rome, Italy, in June 2019. The 41 full papers presented in this volume were carefully reviewed and selected from 206 submissions. The book also contains one invited talk in full paper length. The papers were organized in topical sections named: information system engineering; requirements and modeling; data modeling and analysis; business process modeling and engineering; information system security; and learning and mining in information systems. Abstracts on the CAiSE 2019 tutorials can be found in the back matter of the volume.

**New Perspectives in Software Engineering** - Jezreel Mejia 2020-11-06

This book contains a selection of papers from the 2020 International Conference on Software Process Improvement (CIMPS 20), held between the 21st and 23rd of October in Mazatlán, Sinaloa, México. The CIMPS 20 is a global forum for researchers and practitioners that present and discuss the most recent innovations, trends, results, experiences and concerns in the several perspectives of Software Engineering with clear relationship but not limited to software processes, Security in Information and Communication Technology and Big Data Field. The main topics covered are: Organizational Models, Standards and Methodologies, Software Process Improvement, Knowledge Management, Software Systems, Applications and Tools, Information and Communication Technologies and Processes in Non-software Domains (mining, automotive, aerospace, business, health care, manufacturing, etc.) with a demonstrated relationship to Software Engineering Challenges.

Voice Applications for Alexa and Google Assistant - Dustin Coates 2019-07-04

Summary Voice Applications for Alexa and Google Assistant is your guide to designing, building, and implementing voice-based applications for Alexa and Google Assistant. Inside, you'll learn how to build your own "skills"—the voice app term for actions the device can perform—from scratch. Foreword by Max Amordeluso. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. You'll find registration instructions inside the print book. About the Technology In 2018, an estimated 100 million voice-controlled devices were installed in homes worldwide, and the apps that control them, like Amazon Alexa and Google Assistant, are getting more powerful, with new skills being added every day. Great voice apps improve how users interact with the web, whether they're checking the weather, asking for sports scores, or playing a game. About the Book Voice Applications for Alexa and Google Assistant is your guide to designing, building, and implementing voice-based applications for Alexa and Google Assistant. You'll learn to build applications that listen to users, store information, and rely on user context, as you create a voice-powered sleep tracker from scratch. With the basics mastered, you'll dig deeper into multiuse conversational flow and other more-advanced concepts. Smaller projects along the way reinforce your new techniques and best practices. What's inside Building a call-and-response skill Designing a voice user interface Using conversational context Going multimodal Tips and best practices About the Reader Perfect for developers with intermediate JavaScript skills and basic Node.js skills. No previous experience with voice-first platforms is required. About the Author Dustin A. Coates is a developer who focuses on voice and conversational applications. He's currently the voice search lead at Algolia and is also a Google Developers Expert for Assistant as well as cohost of the VUX World podcast. Table of Contents Introduction to voice first Building a call-and-response skill on Alexa Designing a voice user interface Using entity resolution and built-in intents in Alexa skills Making a conversational Alexa skill VUI and conversation best practices Using conversation tools to add meaning and usability Directing conversation flow Building for Google Assistant Going multimodal Push interactions Building for actions on Google with the Actions SDK

Intelligent Systems and Learning Data Analytics in Online Education - Santi Caballé 2021-06-15

Intelligent Systems and Learning Data Analytics in Online Education provides novel artificial intelligence (AI) and analytics-based methods to improve online teaching and learning. This book addresses key problems such as attrition and lack of engagement in MOOCs and online learning in general. This book explores the state of the art of artificial intelligence, software tools and innovative learning strategies to provide better understanding and solutions to the various challenges of current e-learning in general and MOOC education. In particular, Intelligent Systems and Learning Data Analytics in Online Education shares stimulating theoretical and practical research from leading international experts. This publication provides useful references for educational institutions, industry, academic researchers, professionals, developers, and practitioners to evaluate and apply. Presents the application of innovative AI techniques to collaborative learning activities Offers strategies to provide automatic and effective tutoring to students' activities Offers methods to collect, analyze and correctly visualize learning data in educational environments

Building Chatbots with Python - Sumit Raj 2018-12-12

Build your own chatbot using Python and open source tools. This book begins with an introduction to chatbots where you will gain vital information on their architecture. You will then dive straight into natural language processing with the natural language toolkit (NLTK) for building a custom language processing platform for your chatbot. With this foundation, you will take a look at different natural language processing techniques so that you can choose the right one for you. The next stage is to learn to build a chatbot using the API.ai platform and define its intents and entities. During this example, you will learn to enable communication with your bot and also take a look at key points of its integration and deployment. The final chapter of Building Chatbots with Python teaches you how to build, train, and deploy your very own chatbot. Using open source libraries and machine learning techniques you will learn to predict conditions for your bot and develop a conversational agent as a web application. Finally you will deploy your chatbot on your own server with AWS. What You Will Learn Gain the basics of natural language processing using Python Collect data and train your data for the chatbot Build your chatbot from scratch as a web app Integrate your chatbots with Facebook, Slack, and Telegram Deploy chatbots on your own server Who This Book Is For Intermediate Python developers who have no idea about chatbots. Developers with basic Python

programming knowledge can also take advantage of the book.

Information and Software Technologies - Robertas Damaševičius 2019-10-03

This book constitutes the refereed proceedings of the 25th International Conference on Information and Software Technologies, ICIST 2019, held in Vilnius, Lithuania, in October 2019. The 46 papers presented were carefully reviewed and selected from 121 submissions. The papers are organized in topical sections on information systems; business intelligence for information and software systems; information technology applications; software engineering.

Advances in Information Communication Technology and Computing - Vishal Goar 2023-06-30

The book is a collection of best selected research papers presented at the International Conference on Advances in Information Communication Technology and Computing (AICTC 2022), held in Government Engineering College Bikaner, Bikaner, India during 17 - 18 December 2022. The book covers ICT-based approaches in the areas of ICT for Energy Efficiency, Life Cycle Assessment of ICT, Green IT, Green Information Systems, Environmental Informatics, Energy Informatics, Sustainable HCI, or Computational Sustainability.

**Handbook of Research on Applied Artificial Intelligence and Robotics for Government Processes** - Valle-Cruz, David 2022-09-16

Artificial intelligence (AI) and robotics have boomed in the 21st century. These emerging and disruptive technologies are immersed in our lives, from apps in mobile devices, the purchases we make on the internet streaming platforms, and even court decisions and predictive policing. Together with science and certain needs, relevant implementations of AI and robotics arise, related to its transparency, resulting in biases, the kinds of applications that can be implemented, and the degree of workforce replacement in decision-making assistance. It is essential to analyze the widely used AI techniques, the application of these technologies in different sectors, the implications of AI and robotics on society and welfare, and more. The Handbook of Research on Applied Artificial Intelligence and Robotics for Government Processes presents state-of-the-art research on AI and robotics in different fields of knowledge, its benefits, applications, and implications. It features chapters containing theoretical and practical research that analyzes the transparency and expandability of AI in different fields, as well as the analysis of unexpected results, biases, and cases of discrimination. Covering topics such as criminal intelligence, artificial intelligence-based chatbots, and gender violence, this major reference work is an excellent resource for government officials, practitioners in the public sector, business administrators and managers, IT professionals, law enforcement, federal agencies, students and faculty of higher education, researchers, and academicians.

Information Technology and Systems - Álvaro Rocha 2021-01-30

This book is composed by the papers written in English and accepted for presentation and discussion at The 2021 International Conference on Information Technology & Systems (ICITS 21), held at the Universidad Estatal Península de Santa Elena, in Libertad, Ecuador, between the 10th and the 12th of February 2021. ICITS is a global forum for researchers and practitioners to present and discuss recent findings and innovations, current trends, professional experiences and challenges of modern information technology and systems research, together with their technological development and applications. The main topics covered are information and knowledge management; organizational models and information systems; software and systems modelling; software systems, architectures, applications and tools; multimedia systems and applications; computer networks, mobility and pervasive systems; intelligent and decision support systems; big data analytics and applications; human-computer interaction; ethics, computers & security; health informatics; and information technologies in education.

**Getting Started with Chatbots** - Akhil Mittal 2019-09-20

A complete guide to build a better Chatbots DESCRIPTION This book makes you familiar with the concept of the chatbot. It explains what chatbot is, how does a chatbot work, and what exactly is the need for a chatbot in today's era? It focuses on creating a bot using Amazon's Lex service and getting the bot deployed on Facebook messenger for live chatting. This book will train you on how to create a chatbot using Google's Dialogflow and test the bot in Dialogflow console. It also demonstrates how to create a custom chatbot using Microsoft's bot framework and enable the webhooks in Dialogflow and return the response from the custom bot to Dialogflow intents as a fulfillment response. KEY FEATURES Concept of artificial intelligence (AI) and

machine learning How AI is involved in creating chatbots What are chatbots Chatbot development Live chatting Create chatbot with technologies such as Amazon Lex, Google Dialogflow, AWS Lambda, Microsoft Bot Framework, and Azure Deploy and talk to your bot WHAT WILL YOU LEARN Learn the concept of chatbot Learn how chatbots and AI work hand in hand Learn the concept of machine learning in chatbots Get familiar with chatbot services such as Amazon's Lex and Google's Dialogflow Learn how to write an AWS Lambda function Learn what webhooks are Learn about Microsoft's Bot Framework Write your own custom chatbot Deploy the chatbot on Facebook Messenger, Google Assistant, and Slack Live chatting with your own chatbot WHO THIS BOOK IS FOR The developers, architects, and software/technology enthusiasts who are keen to learn the cutting-edge technologies and want to get a hands-on experience on AI by creating their own custom chatbots. Organizations, small companies, service-based/product-based setups which want to learn how to create a basic chatbot on their website and on social media to get more leads and reach to the end user for their business. Students, if they are seeking something where they can create and integrate the real-time chatbots in their projects. Table of Contents Section 1: The Concept 1. What are Chatbots? 2. How Chatbot Works 3. What is the Need for a Chatbot? 4. Conversational Flow? Section 2: Creating a Chatbot Using Amazon Lex 1. Amazon Lex and AWS Account 2. Create Bot Using Amazon Lex 3. AWS Lambda Function 4. Slots 5. Error Handling 6. Deploy the Bot on Facebook Messenger 7. Live Chatbot on Facebook Section 3: Creating a Chatbot Using Dialogflow API and Microsoft's Bot Framework Technical Requirements 1. Dialogflow Account 2. Creating a Bot in Dialogflow 3. Dialogflow Console 4. Integrating the Bot with Slack 5. Chatbot Using Microsoft Bot Framework 6. Publishing the Bot from Visual Studio to Azure 7. Register the Bot 8. Dialogflow.v2 SDK 9. Webhooks in Dialogflow 10. Testing the Bot 11. Deploy the Chatbot in Facebook Messenger 12. Live Chatbot on Facebook 13. Deploy the Chatbot in Slack

#### **Cognitive Virtual Assistants Using Google Dialogflow** - Navin Sabharwal 2020-03-16

Follow a step-by-step, hands-on approach to building production-ready enterprise cognitive virtual assistants using Google Dialogflow. This book provides an overview of the various cognitive technology choices available and takes a deep dive into cognitive virtual agents for handling complex real-life use cases in various industries such as travel and weather. You'll delve deeper into the advanced features of cognitive virtual assistants implementing features such as input/output context, follow-up intents, actions and parameters, and handling complex multiple intents. You'll learn how to integrate with third-party messaging platforms by integrating your cognitive bot with Facebook messenger. You'll also integrate with third-party APIs to enrich your cognitive bots using webhooks. Cognitive Virtual Assistants Using Google Dialogflow takes the complexity out of the cognitive platform and provides rich guidance which you can use when developing your own cognitive bots. The book covers Google Dialogflow in-depth and starts with the basics, serving as a hands-on guide for developers who are starting out on their journey with Google Dialogflow. All the code presented in the book will be available in the form of scripts and configuration files, which allows you to try out the examples and extend them in interesting ways. What You Will Learn Develop cognitive bots with Google Dialogflow technology Use advanced features to handle complex conversation scenarios Enrich the bot's conversations by understanding the sentiment of the user See best practices for developing cognitive bots Enhance a cognitive bot by integrating with third-party services Who This Book Is For AI and ML developers.

#### **Official Google Cloud Certified Professional Data Engineer Study Guide** - Dan Sullivan 2020-05-18

The proven Study Guide that prepares you for this new Google Cloud exam The Google Cloud Certified Professional Data Engineer Study Guide, provides everything you need to prepare for this important exam and master the skills necessary to land that coveted Google Cloud Professional Data Engineer certification. Beginning with a pre-book assessment quiz to evaluate what you know before you begin, each chapter features exam objectives and review questions, plus the online learning environment includes additional complete practice tests. Written by Dan Sullivan, a popular and experienced online course author for machine learning, big data, and Cloud topics, Google Cloud Certified Professional Data Engineer Study Guide is your ace in the hole for deploying and managing analytics and machine learning applications. • Build and operationalize storage systems, pipelines, and compute infrastructure • Understand machine learning models and learn how to select pre-built models • Monitor and troubleshoot machine learning models • Design analytics and machine learning applications that are secure, scalable, and highly available. This exam

guide is designed to help you develop an in depth understanding of data engineering and machine learning on Google Cloud Platform.

#### **The Definitive Guide to Conversational AI with Dialogflow and Google Cloud** - Lee Boonstra 2021

Build enterprise chatbots for web, social media, voice assistants, IoT, and telephony contact centers with Google's Dialogflow conversational AI technology. This book will explain how to get started with conversational AI using Google and how enterprise users can use Dialogflow as part of Google Cloud. It will cover the core concepts such as Dialogflow essentials, deploying chatbots on web and social media channels, and building voice agents including advanced tips and tricks such as intents, entities, and working with context. The Definitive Guide to Conversational AI with Dialogflow and Google Cloud also explains how to build multilingual chatbots, orchestrate sub chatbots into a bigger conversational platform, use virtual agent analytics with popular tools, such as BigQuery or Chatbase, and build voice bots. It concludes with coverage of more advanced use cases, such as building fulfillment functionality, building your own integrations, securing your chatbots, and building your own voice platform with the Dialogflow SDK and other Google Cloud machine learning APIs. After reading this book, you will understand how to build cross-channel enterprise bots with popular Google tools such as Dialogflow, Google Cloud AI, Cloud Run, Cloud Functions, and Chatbase. You will: Discover Dialogflow, Dialogflow Essentials, Dialogflow CX, and how machine learning is used Create Dialogflow projects for individuals and enterprise usage Work with Dialogflow essential concepts such as intents, entities, custom entities, system entities, composites, and how to track context Build bots quickly using prebuilt agents, small talk modules, and FAQ knowledge bases Use Dialogflow for an out-of-the-box agent review Deploy text conversational UIs for web and social media channels Build voice agents for voice assistants, phone gateways, and contact centers Create multilingual chatbots Orchestrate many sub-chatbots to build a bigger conversational platform Use chatbot analytics and test the quality of your Dialogflow agent See the new Dialogflow CX concepts, how Dialogflow CX fits in, and what's different in Dialogflow CX.

#### **Getting Started with Chatbots** - Mittal Akhil 2019-09-20

A complete guide to build a better Chatbots Key features Concept of artificial intelligence (AI) and machine learning How AI is involved in creating chatbots What are chatbots Chatbot development Live chatting Create chatbot with technologies such as Amazon Lex, Google Dialogflow, AWS Lambda, Microsoft Bot Framework, and Azure Deploy and talk to your bot Description This book makes you familiar with the concept of the chatbot. It explains what chatbot is, how does a chatbot work, and what exactly is the need for a chatbot in today's era? It focuses on creating a bot using Amazon's Lex service and getting the bot deployed on Facebook messenger for live chatting. This book will train you on how to create a chatbot using Google's Dialogflow and test the bot in Dialogflow console. It also demonstrates how to create a custom chatbot using Microsoft's bot framework and enable the webhooks in Dialogflow and return the response from the custom bot to Dialogflow intents as a fulfillment response. What will you learn Learn the concept of chatbot Learn how chatbots and AI work hand in hand Learn the concept of machine learning in chatbots Get familiar with chatbot services such as Amazon's Lex and Google's Dialogflow Learn how to write an AWS Lambda function Learn what webhooks are Learn about Microsoft's Bot Framework Write your own custom chatbot Deploy the chatbot on Facebook Messenger, Google Assistant, and Slack Live chatting with your own chatbot Who this book is for The developers, architects, and software/technology enthusiasts who are keen to learn the cutting-edge technologies and want to get a hands-on experience on AI by creating their own custom chatbots. Organizations, small companies, service-based/product-based setups which want to learn how to create a basic chatbot on their website and on social media to get more leads and reach to the end user for their business. Students, if they are seeking something where they can create and integrate the real-time chatbots in their projects. Table of contents Section 1: The Concept 1. What are Chatbots? 2. How Chatbot Works 3. What is the Need for a Chatbot? 4. Conversational Flow? Section 2: Creating a Chatbot Using Amazon Lex 1. Amazon Lex and AWS Account 2. Create Bot Using Amazon Lex 3. AWS Lambda Function 4. Slots 5. Error Handling 6. Deploy the Bot on Facebook Messenger 7. Live Chatbot on Facebook Section 3: Creating a Chatbot Using Dialogflow API and Microsoft's Bot Framework Technical Requirements 1. Dialogflow Account 2. Creating a Bot in Dialogflow 3. Dialogflow Console 4. Integrating the Bot with Slack 5. Chatbot Using Microsoft Bot Framework 6. Publishing the Bot from Visual Studio to Azure 7. Register the Bot 8. Dialogflow.v2 SDK 9.

Webhooks in Dialogflow10. Testing the Bot11. Deploy the Chatbot in Facebook Messenger12. Live Chatbot on Facebook13. Deploy the Chatbot in Slack14. Future of ChatbotsAbout the authorAkhil Mittal is two times Microsoft MVP (Most Valuable Professional) firstly awarded in 2016 continued in 2017 in Visual Studio and Technologies category, C# Corner MVP since 2013, Code Project MVP since 2014, a blogger, author and likes to write/read technical articles, blogs and books. He works as a Sr. Consultant with Magic Edtech (<https://www.magicedtech.com/>) which is recognized as a global leader in delivering end to end learning solutions. He has an experience of around 12 years in developing, designing, architecting enterprises level applications primarily in Microsoft Technologies. He has a diverse experience in working on cutting edge technologies that include Microsoft Stack, AI, Machine Learning and Cloud computing. Akhil is an MCP (Microsoft Certified Professional) in Web Applications and Dot Net Framework.His linkedin: [linkedin.com/in/akhilmittal](https://www.linkedin.com/in/akhilmittal)

#### **Developing Conversational Interfaces for iOS** - Martin Mitrevski 2018-01-09

Learn how to incorporate your own conversational interfaces into iOS applications. This book will help you work comfortably multiple frameworks, including Apple's Speech and SiriKit frameworks; Google's API.AI conversational interfaces platform; and Facebook's Wit.ai. You'll explore the basics of natural language processing on iOS and see how to develop sentiment analysis with Apple's new Core ML framework. You'll also understand the primary challenges of conversational interfaces, and how to future proof your design. With the introduction of SiriKit and the Speech framework, iOS developers now have huge opportunities to incorporate conversational interfaces into their apps. The latest advancements in natural language processing and machine learning allow for the development of complex conversational interfaces. This book incorporates all aspects of conversational interfaces on iOS—from voice transcription to natural language processing and entities extraction to text to speech commands. What You'll Learn Integrate intelligent voice interfaces into iOS applications Use frameworks to enable voice reactive iOS applications Future proof your interface by understanding the expected future trends of voice recognition Who This Book Is For Primarily iOS developers, product and innovation managers, and UX experts. It will also be helpful to all developers/managers that want to provide conversational interfaces in their apps.

#### The Definitive Guide to Conversational AI with Dialogflow and Google Cloud - Lee Boonstra 2021-06-25

Build enterprise chatbots for web, social media, voice assistants, IoT, and telephony contact centers with Google's Dialogflow conversational AI technology. This book will explain how to get started with conversational AI using Google and how enterprise users can use Dialogflow as part of Google Cloud. It will cover the core concepts such as Dialogflow essentials, deploying chatbots on web and social media channels, and building voice agents including advanced tips and tricks such as intents, entities, and working with context. The Definitive Guide to Conversational AI with Dialogflow and Google Cloud also explains how to build multilingual chatbots, orchestrate sub chatbots into a bigger conversational platform, use virtual agent analytics with popular tools, such as BigQuery or Chatbase, and build voice bots. It concludes with coverage of more advanced use cases, such as building fulfillment functionality, building your own integrations, securing your chatbots, and building your own voice platform with the Dialogflow SDK and other Google Cloud machine learning APIs. After reading this book, you will understand how to build cross-channel enterprise bots with popular Google tools such as Dialogflow, Google Cloud AI, Cloud Run, Cloud Functions, and Chatbase. What You Will Learn Discover Dialogflow, Dialogflow Essentials, Dialogflow CX, and how machine learning is used Create Dialogflow projects for individuals and enterprise usage Work with Dialogflow essential concepts such as intents, entities, custom entities, system entities, composites, and how to track context Build bots quickly using prebuilt agents, small talk modules, and FAQ knowledge bases Use Dialogflow for an out-of-the-box agent review Deploy text conversational UIs for web and social media channels Build voice agents for voice assistants, phone gateways, and contact centers Create multilingual chatbots Orchestrate many sub-chatbots to build a bigger conversational platform Use chatbot analytics and test the quality of your Dialogflow agent See the new Dialogflow CX concepts, how Dialogflow CX fits in, and what's different in Dialogflow CX Who This Book Is For Everyone interested in building chatbots for web, social media, voice assistants, or contact centers using Google's conversational AI/cloud technology.

#### **Computational Science - ICCS 2020** - Valeria V. Krzhizhanovskaya 2020-06-18

The seven-volume set LNCS 12137, 12138, 12139, 12140, 12141, 12142, and 12143 constitutes the

proceedings of the 20th International Conference on Computational Science, ICCS 2020, held in Amsterdam, The Netherlands, in June 2020.\* The total of 101 papers and 248 workshop papers presented in this book set were carefully reviewed and selected from 719 submissions (230 submissions to the main track and 489 submissions to the workshops). The papers were organized in topical sections named: Part I: ICCS Main Track Part II: ICCS Main Track Part III: Track of Advances in High-Performance Computational Earth Sciences: Applications and Frameworks; Track of Agent-Based Simulations, Adaptive Algorithms and Solvers; Track of Applications of Computational Methods in Artificial Intelligence and Machine Learning; Track of Biomedical and Bioinformatics Challenges for Computer Science Part IV: Track of Classifier Learning from Difficult Data; Track of Complex Social Systems through the Lens of Computational Science; Track of Computational Health; Track of Computational Methods for Emerging Problems in (Dis-)Information Analysis Part V: Track of Computational Optimization, Modelling and Simulation; Track of Computational Science in IoT and Smart Systems; Track of Computer Graphics, Image Processing and Artificial Intelligence Part VI: Track of Data Driven Computational Sciences; Track of Machine Learning and Data Assimilation for Dynamical Systems; Track of Meshfree Methods in Computational Sciences; Track of Multiscale Modelling and Simulation; Track of Quantum Computing Workshop Part VII: Track of Simulations of Flow and Transport: Modeling, Algorithms and Computation; Track of Smart Systems: Bringing Together Computer Vision, Sensor Networks and Machine Learning; Track of Software Engineering for Computational Science; Track of Solving Problems with Uncertainties; Track of Teaching Computational Science; Track of UNcErtainty QUantificatiOn for ComputatiOnAl modeLs \*The conference was canceled due to the COVID-19 pandemic.

#### *Hybrid Artificial Intelligent Systems* - Pablo García Bringas 2022-09-11

This book constitutes the refereed proceedings of the 17th International Conference on Hybrid Artificial Intelligent Systems, HAIS 2022, held in Salamanca, Spain, in September 2022. The 43 full papers presented in this book were carefully reviewed and selected from 67 submissions. They were organized in topical sections as follows: bioinformatics; data mining and decision support systems; deep learning; evolutionary computation; HAIS applications; image and speech signal processing; and optimization techniques.

#### *Applied Soft Computing and Communication Networks* - Sabu M. Thampi 2021-07-01

This book constitutes thoroughly refereed post-conference proceedings of the International Applied Soft Computing and Communication Networks (ACN 2020) held in VIT, Chennai, India, during October 14–17, 2020. The research papers presented were carefully reviewed and selected from several initial submissions. The book is directed to the researchers and scientists engaged in various fields of intelligent systems.

#### **Learning and Collaboration Technologies. Ubiquitous and Virtual Environments for Learning and Collaboration** - Panayiotis Zaphiris 2019-07-10

This two-volume set LNCS 11590 and 11591 constitutes the refereed proceedings of the 6th International Conference on Learning and Collaboration Technologies, LCT 2019, held as part of the 21st International Conference on Human-Computer Interaction, HCII 2019, in Orlando, FL, USA in July 2019. The 1274 full papers 209 posters presented at the HCII 2019 conferences were carefully reviewed and selected from 5029 submissions. The papers cover the entire field of human-computer interaction, addressing major advances in knowledge and effective use of computers in a variety of applications areas. The papers in this volume are organized in the following topical sections: mobile and ubiquitous learning; virtual reality and augmented reality systems for learning; and collaborative technology.

#### Advanced Natural Language Processing with TensorFlow 2 - Ashish Bansal 2021-02-04

One-stop solution for NLP practitioners, ML developers, and data scientists to build effective NLP systems that can perform real-world complicated tasks Key FeaturesApply deep learning algorithms and techniques such as BiLSTMS, CRFs, BPE and more using TensorFlow 2Explore applications like text generation, summarization, weakly supervised labelling and moreRead cutting edge material with seminal papers provided in the GitHub repository with full working codeBook Description Recently, there have been tremendous advances in NLP, and we are now moving from research labs into practical applications. This book comes with a perfect blend of both the theoretical and practical aspects of trending and complex NLP techniques. The book is focused on innovative applications in the field of NLP, language generation, and dialogue systems. It helps you apply the concepts of pre-processing text using techniques such as tokenization, parts of speech tagging, and lemmatization using popular libraries such as Stanford NLP and

SpaCy. You will build Named Entity Recognition (NER) from scratch using Conditional Random Fields and Viterbi Decoding on top of RNNs. The book covers key emerging areas such as generating text for use in sentence completion and text summarization, bridging images and text by generating captions for images, and managing dialogue aspects of chatbots. You will learn how to apply transfer learning and fine-tuning using TensorFlow 2. Further, it covers practical techniques that can simplify the labelling of textual data. The book also has a working code that is adaptable to your use cases for each tech piece. By the end of the book, you will have an advanced knowledge of the tools, techniques and deep learning architecture used to solve complex NLP problems. What you will learn Grasp important pre-steps in building NLP applications like POS tagging Use transfer and weakly supervised learning using libraries like Snorkel Do sentiment analysis using BERT Apply encoder-decoder NN architectures and beam search for summarizing texts Use Transformer models with attention to bring images and text together Build apps that generate captions and answer questions about images using custom Transformers Use advanced TensorFlow techniques like learning rate annealing, custom layers, and custom loss functions to build the latest DeepNLP models Who this book is for This is not an introductory book and assumes the reader is familiar with basics of NLP and has fundamental Python skills, as well as basic knowledge of machine learning and undergraduate-level calculus and linear algebra. The readers who can benefit the most from this book include intermediate ML developers who are familiar with the basics of supervised learning and deep learning techniques and professionals who already use TensorFlow/Python for purposes such as data science, ML, research, analysis, etc.

Voice User Interface Projects - Henry Lee 2018-07-31

Develop intelligent voice-empowered applications and Chatbots that not only understand voice commands but also respond to it Key Features Target multiple platforms by creating voice interactions for your applications Explore real-world examples of how to produce smart and practical virtual assistants Build a virtual assistant for cars using Android Auto in Xamarin Book Description From touchscreen and mouse-click, we are moving to voice- and conversation-based user interfaces. By adopting Voice User Interfaces (VUIs), you can create a more compelling and engaging experience for your users. Voice User Interface Projects teaches you how to develop voice-enabled applications for desktop, mobile, and Internet of Things (IoT) devices. This book explains in detail VUI and its importance, basic design principles of VUI, fundamentals of conversation, and the different voice-enabled applications available in the market. You will learn how to build your first voice-enabled application by utilizing DialogFlow and Alexa's natural language processing (NLP) platform. Once you are comfortable with building voice-enabled applications, you will understand how to dynamically process and respond to the questions by using NodeJS server deployed to the cloud. You will then move on to securing NodeJS RESTful API for DialogFlow and Alexa webhooks, creating unit tests and building voice-enabled podcasts for cars. Last but not the least you will discover advanced topics such as handling sessions, creating custom intents, and extending built-in intents in order to build conversational VUIs that will help engage the users. By the end of the book, you will have grasped a thorough knowledge of how to design and develop interactive VUIs. What you will learn Understand NLP platforms with machine learning Exploit best practices and user experiences in creating VUI Build voice-enabled chatbots Host, secure, and test in a cloud platform Create voice-enabled applications for personal digital assistant devices Develop a virtual assistant for cars Who this book is for Voice User Interface Projects is for you if you are a software engineer who wants to develop voice-enabled applications for your personal digital assistant devices such as Amazon Echo and Google Home, along with your car's virtual assistant systems. Some experience with JavaScript is required.

Mobile Deep Learning with TensorFlow Lite, ML Kit and Flutter - Anubhav Singh 2020-04-06

Learn how to deploy effective deep learning solutions on cross-platform applications built using TensorFlow Lite, ML Kit, and Flutter Key Features Work through projects covering mobile vision, style transfer, speech processing, and multimedia processing Cover interesting deep learning solutions for mobile Build your confidence in training models, performance tuning, memory optimization, and neural network deployment through every project Book Description Deep learning is rapidly becoming the most popular topic in the mobile app industry. This book introduces trending deep learning concepts and their use cases with an industrial and application-focused approach. You will cover a range of projects covering tasks such as mobile vision, facial recognition, smart artificial intelligence assistant, augmented reality, and more. With the help of

eight projects, you will learn how to integrate deep learning processes into mobile platforms, iOS, and Android. This will help you to transform deep learning features into robust mobile apps efficiently. You'll get hands-on experience of selecting the right deep learning architectures and optimizing mobile deep learning models while following an application oriented-approach to deep learning on native mobile apps. We will later cover various pre-trained and custom-built deep learning model-based APIs such as machine learning (ML) Kit through Firebase. Further on, the book will take you through examples of creating custom deep learning models with TensorFlow Lite. Each project will demonstrate how to integrate deep learning libraries into your mobile apps, right from preparing the model through to deployment. By the end of this book, you'll have mastered the skills to build and deploy deep learning mobile applications on both iOS and Android. What you will learn Create your own customized chatbot by extending the functionality of Google Assistant Improve learning accuracy with the help of features available on mobile devices Perform visual recognition tasks using image processing Use augmented reality to generate captions for a camera feed Authenticate users and create a mechanism to identify rare and suspicious user interactions Develop a chess engine based on deep reinforcement learning Explore the concepts and methods involved in rolling out production-ready deep learning iOS and Android applications Who this book is for This book is for data scientists, deep learning and computer vision engineers, and natural language processing (NLP) engineers who want to build smart mobile apps using deep learning methods. You will also find this book useful if you want to improve your mobile app's user interface (UI) by harnessing the potential of deep learning. Basic knowledge of neural networks and coding experience in Python will be beneficial to get started with this book.

Professional Cloud Architect Google Cloud Certification Guide - Konrad Clapa 2021-12-23

Become a Professional Cloud Architect by exploring the essential concepts, tools, and services in GCP and working through practice tests designed to help you take the exam confidently Key Features Plan and design a GCP cloud solution architecture Ensure the security and reliability of your cloud solutions and operations Assess your knowledge by taking mock tests with up-to-date exam questions Book Description Google Cloud Platform (GCP) is one of the industry leaders thanks to its array of services that can be leveraged by organizations to bring the best out of their infrastructure. This book is a comprehensive guide for learning methods to effectively utilize GCP services and help you become acquainted with the topics required to pass Google's Professional Cloud Architect certification exam. Following the Professional Cloud Architect's official exam syllabus, you'll first be introduced to the GCP. The book then covers the core services that GCP offers, such as computing and storage, and takes you through effective methods of scaling and automating your cloud infrastructure. As you progress through the chapters, you'll get to grips with containers and services and discover best practices related to the design and process. This revised second edition features new topics such as Cloud Run, Anthos, Data Fusion, Composer, and Data Catalog. By the end of this book, you'll have gained the knowledge required to take and pass the Google Cloud Certification - Professional Cloud Architect exam and become an expert in GCP services. What you will learn Understand the benefits of being a Google Certified Professional Cloud Architect Find out how to enroll for the Professional Cloud Architect exam Master the compute options in GCP Explore security and networking options in GCP Get to grips with managing and monitoring your workloads in GCP Understand storage, big data, and machine learning services Become familiar with exam scenarios and passing strategies Who this book is for If you are a cloud architect, cloud engineer, administrator, or any IT professional looking to learn how to implement Google Cloud services in your organization and become a GCP Certified Professional Cloud Architect, this book is for you. Basic knowledge of server infrastructure, including Linux and Windows Servers, is assumed. A solid understanding of network and storage will help you to make the most out of this book.

**Advances in Practical Applications of Agents, Multi-Agent Systems, and Social Good. The PAAMS Collection** - Frank Dignum 2021-09-24

This book constitutes the proceedings of the 19th International Conference on Practical Applications of Agents and Multi-Agent Systems, PAAMS 2021, held in Salamanca, Spain, in October 2021. The 27 regular and 13 short papers presented in this volume were carefully reviewed and selected from 56 submissions. They deal with the application and validation of agent-based models, methods, and technologies in a number of key applications areas, including: advanced models and learning, agent-based programming, decision-

making, education and social interactions, formal and theoretic models, health and safety, mobility and the city, swarms and task allocation.