

C Face Detection And Recognition With Azure Face Api Pdf

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Programming the Microsoft Bot Framework - Joe Mayo 2017-11-21

This is the only comprehensive, authoritative guide to building Conversational User Interfaces (CUI, a.k.a. bots, chatbots, or chatterbots) with the Microsoft Bot Framework. Reflecting the next radical revolution in human-computer interaction, it will help you leverage advanced artificial intelligence (AI) and natural language processing to empower new and existing applications with stunningly intuitive conversational interfaces. Long-time Microsoft MVP Joe Mayo begins with high-level explanations of what Microsoft Bot Framework is, what you can do with it, and why it matters so much. Next, he presents the foundational knowledge you need to start creating real bots and CUIs. Step by step, you'll learn how to build message dialogs, manage conversations, interact with framework APIs, and incorporate powerful natural language processing with Microsoft's advanced Language Understanding Intelligent Service (LUIS). Mayo also offers detailed guidance on deploying your customized bots to key platforms such as Slack, Skype, and Facebook Messenger. Throughout, Mayo's practical examples combine code with clear explanations of when and why you would perform each task. From start to finish, Programming the Microsoft Bot Framework is relentlessly practical, helping you translate the advanced "magic" of intelligent bots into real solutions right now.

Intelligent Systems and Applications - Kohei Arai 2021-08-03

This book presents Proceedings of the 2021 Intelligent Systems Conference which is a remarkable collection of chapters covering a wider range of topics in areas of intelligent systems and artificial intelligence and their applications to the real world. The conference attracted a total of 496 submissions from many academic pioneering researchers, scientists, industrial engineers, and students from all around the world. These submissions underwent a double-blind peer-review process. Of the total submissions, 180 submissions have been selected to be included in these proceedings. As we witness exponential growth of computational intelligence in several directions and use of intelligent

systems in everyday applications, this book is an ideal resource for reporting latest innovations and future of AI. The chapters include theory and application on all aspects of artificial intelligence, from classical to intelligent scope. We hope that readers find the book interesting and valuable; it provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research.

Deep Learning with Azure - Mathew Salvaris 2018

Get up-to-speed with Microsoft's AI Platform. Learn to innovate and accelerate with open and powerful tools and services that bring artificial intelligence to every data scientist and developer. Artificial Intelligence (AI) is the new normal. Innovations in deep learning algorithms and hardware are happening at a rapid pace. It is no longer a question of should I build AI into my business, but more about where do I begin and how do I get started with AI? Written by expert data scientists at Microsoft, Deep Learning with the Microsoft AI Platform helps you with the how-to of doing deep learning on Azure and leveraging deep learning to create innovative and intelligent solutions. Benefit from guidance on where to begin your AI adventure, and learn how the cloud provides you with all the tools, infrastructure, and services you need to do AI. What You'll Learn Become familiar with the tools, infrastructure, and services available for deep learning on Microsoft Azure such as Azure Machine Learning services and Batch AI Use pre-built AI capabilities (Computer Vision, OCR, gender, emotion, landmark detection, and more) Understand the common deep learning models, including convolutional neural networks (CNNs), recurrent neural networks (RNNs), generative adversarial networks (GANs) with sample code and understand how the field is evolving Discover the options for training and operationalizing deep learning models on Azure Who This Book Is For Professional data scientists who are interested in learning more about deep learning and how to use the Microsoft AI platform. Some experience with Python is helpful.

The Science of Facial Expression - José-Miguel Fernández-Dols 2017-04-14

The importance of facial expressions has led to a steadily growing body of empirical findings and theoretical analyses. Every decade has seen work that extends or challenges previous thinking on facial expression. The Science of Facial Expression provides an updated review of the current psychology of facial expression. This book summarizes current conclusions and conceptual frameworks from leading figures who have shaped the field in their various subfields, and will therefore be of interest to practitioners, students, and researchers of emotion in cognitive psychology, neuroscience, biology, anthropology, linguistics, affective computing, and homeland security. Organized in eleven thematic sections, The Science of Facial Expression offers a broad perspective of the "geography" of the science of facial expression. It reviews the scientific history of emotion perception and the evolutionary origins and functions of facial expression. It includes an updated compilation on the great debate around Basic Emotion Theory versus Behavioral Ecology and Psychological constructionism. The developmental psychology and social psychology of facial expressions is explored in the role of facial expressions in child development, social interactions, and culture. The book also covers appraisal theory, concepts, neural and behavioral processes, and lesser-known facial behaviors such as yawning, vocal crying, and vomiting. In addition, the

book reflects that research on the "expression of emotion" is moving towards a significance of context in the production and interpretation of facial expression. The authors expose various fundamental questions and controversies yet to be resolved, but in doing so, open many sources of inspiration to pursue in the scientific study of facial expression.

Microsoft Azure Essentials Azure Machine Learning - Jeff Barnes 2015-04-25
Microsoft Azure Essentials from Microsoft Press is a series of free ebooks designed to help you advance your technical skills with Microsoft Azure. This third ebook in the series introduces Microsoft Azure Machine Learning, a service that a developer can use to build predictive analytics models (using training datasets from a variety of data sources) and then easily deploy those models for consumption as cloud web services. The ebook presents an overview of modern data science theory and principles, the associated workflow, and then covers some of the more common machine learning algorithms in use today. It builds a variety of predictive analytics models using real world data, evaluates several different machine learning algorithms and modeling strategies, and then deploys the finished models as machine learning web services on Azure within a matter of minutes. The ebook also expands on a working Azure Machine Learning predictive model example to explore the types of client and server applications you can create to consume Azure Machine Learning web services. Watch Microsoft Press's blog and Twitter (@MicrosoftPress) to learn about other free ebooks in the Microsoft Azure Essentials series.

AI-900: Microsoft Azure AI Fundamentals Preparation - NEW - G Skills
Microsoft AI-900 Azure AI Fundamentals offers professional-level preparation that helps candidates maximize their exam performance and sharpen their skills on the job. It's a preparation Book for students who want to pass the AI-900: Microsoft Azure AI Fundamentals exam on the first Try! Save their Money and Their Time! Here we've brought best Exam Practice Questions for Microsoft AI-900 Azure AI Fundamentals exam so that you can prepare well for this exam. This Book is aligned with Microsoft AI-900 Exam Review Manual and covers all the topics that a Microsoft AI-900 Candidates needs to understand in order to pass the exam successfully and on the first try. The book practice tests contain all New, recurrent Practice questions that are designed to simulate the real exam scenario. This book contains tests that will help you in gaining more confidence on exam preparation and self-evaluation against the real exam content. This set of Exclusive practice tests will test you on questions asked in the actual certification. Microsoft AI-900 Azure AI Fundamentals is an opportunity to demonstrate knowledge of common ML and AI workloads and how to implement them on Azure. Skills measured The content of this exam was updated on April 23, 2021. Describe AI workloads and considerations (15-20%) Describe fundamental principles of machine learning on Azure (30-35%) Describe features of computer vision workloads on Azure (15-20%) Describe features of Natural Language Processing (NLP) workloads on Azure (15-20%) Describe features of conversational AI workloads on Azure (15-20%) Azure AI Fundamentals can be used to prepare for other Azure role-based certifications like Azure Data Scientist Associate or Azure AI Engineer Associate, but it's not a prerequisite for any of them. Welcome!

The Oxford Handbook of Affective Computing - Rafael A. Calvo 2015

"The Oxford Handbook of Affective Computing is a definitive reference in the burgeoning field of affective computing (AC), a multidisciplinary field encompassing computer science, engineering, psychology, education, neuroscience, and other disciplines. AC research explores how affective factors influence interactions between humans and technology, how affect sensing and affect generation techniques can inform our understanding of human affect, and on the design, implementation, and evaluation of systems involving affect at their core. The volume features 41 chapters and is divided into five sections: history and theory, detection, generation, methodologies, and applications. Section 1 begins with the making of AC and a historical review of the science of emotion. The following chapters discuss the theoretical underpinnings of AC from an interdisciplinary viewpoint. Section 2 examines affect detection or recognition, a commonly investigated area. Section 3 focuses on aspects of affect generation, including the synthesis of emotion and its expression via facial features, speech, postures, and gestures. Cultural issues are also discussed. Section 4 focuses on methodological issues in AC research, including data collection techniques, multimodal affect databases, formats for the representation of emotion, crowdsourcing techniques, machine learning approaches, affect elicitation techniques, useful AC tools, and ethical issues. Finally, Section 5 highlights applications of AC in such domains as formal and informal learning, games, robotics, virtual reality, autism research, health care, cyberpsychology, music, deception, reflective writing, and cyberpsychology. This compendium will prove suitable for use as a textbook and serve as a valuable resource for everyone with an interest in AC."--

Microsoft Azure - Julian Soh 2020-09-21

Gain the technical and business insight needed to plan, deploy, and manage the services provided by the Microsoft Azure cloud. This second edition focuses on improving operational decision tipping points for the professionals leading DevOps and security teams. This will allow you to make an informed decision concerning the workloads appropriate for your growing business in the Azure public cloud. Microsoft Azure starts with an introduction to Azure along with an overview of its architecture services such as IaaS and PaaS. You'll also take a look into Azure's data, artificial intelligence, and machine learning services. Moving on, you will cover the planning for and adoption of Azure where you will go through budgeting, cloud economics, and designing a hybrid data center. Along the way, you will work with web apps, network PaaS, virtual machines, and much more. The final section of the book starts with Azure data services and big data with an in-depth discussion of Azure SQL Database, CosmosDB, Azure Data Lakes, and MySQL. You will further see how to migrate on-premises databases to Azure and use data engineering. Next, you will discover the various Azure services for application developers, including Azure DevOps and ASP.NET web apps. Finally, you will go through the machine learning and AI tools in Azure, including Azure Cognitive Services. What You Will Learn Apply design guidance and best practices using Microsoft Azure to achieve business growth Create and manage virtual machines Work with AI frameworks to process and analyze data to support business decisions and increase revenue Deploy, publish, and monitor a web app Who This Book Is For Azure architects and business professionals looking for Azure deployment and implementation advice.

Handbook of Face Recognition - Stan Z. Li 2011-08-22

This highly anticipated new edition provides a comprehensive account of face recognition research and technology, spanning the full range of topics needed for designing operational face recognition systems. After a thorough introductory chapter, each of the following chapters focus on a specific topic, reviewing background information, up-to-date techniques, and recent results, as well as offering challenges and future directions. Features: fully updated, revised and expanded, covering the entire spectrum of concepts, methods, and algorithms for automated face detection and recognition systems; provides comprehensive coverage of face detection, tracking, alignment, feature extraction, and recognition technologies, and issues in evaluation, systems, security, and applications; contains numerous step-by-step algorithms; describes a broad range of applications; presents contributions from an international selection of experts; integrates numerous supporting graphs, tables, charts, and performance data.

Beyond the Basic Stuff with Python - Al Sweigart 2020-12-16

BRIDGE THE GAP BETWEEN NOVICE AND PROFESSIONAL You've completed a basic Python programming tutorial or finished Al Sweigart's bestseller, *Automate the Boring Stuff with Python*. What's the next step toward becoming a capable, confident software developer? Welcome to *Beyond the Basic Stuff with Python*. More than a mere collection of advanced syntax and masterful tips for writing clean code, you'll learn how to advance your Python programming skills by using the command line and other professional tools like code formatters, type checkers, linters, and version control. Sweigart takes you through best practices for setting up your development environment, naming variables, and improving readability, then tackles documentation, organization and performance measurement, as well as object-oriented design and the Big-O algorithm analysis commonly used in coding interviews. The skills you learn will boost your ability to program--not just in Python but in any language. You'll learn: Coding style, and how to use Python's Black auto-formatting tool for cleaner code Common sources of bugs, and how to detect them with static analyzers How to structure the files in your code projects with the Cookiecutter template tool Functional programming techniques like lambda and higher-order functions How to profile the speed of your code with Python's built-in timeit and cProfile modules The computer science behind Big-O algorithm analysis How to make your comments and docstrings informative, and how often to write them How to create classes in object-oriented programming, and why they're used to organize code Toward the end of the book you'll read a detailed source-code breakdown of two classic command-line games, the Tower of Hanoi (a logic puzzle) and Four-in-a-Row (a two-player tile-dropping game), and a breakdown of how their code follows the book's best practices. You'll test your skills by implementing the program yourself. Of course, no single book can make you a professional software developer. But *Beyond the Basic Stuff with Python* will get you further down that path and make you a better programmer, as you learn to write readable code that's easy to debug and perfectly Pythonic Requirements: Covers Python 3.6 and higher

Chatbot Research and Design - Asbjørn Følstad 2020-01-18

This book constitutes the refereed proceedings of the Third International

Workshop on Chatbot Research and Design, CONVERSATIONS 2019, held in Amsterdam, The Netherlands, in November 2019. The 18 revised full papers presented in this volume were carefully reviewed and selected from 31 submissions. The papers are grouped in the following topical sections: user and communication studies user experience and design, chatbots for collaboration, chatbots for customer service, and chatbots in education.

Advances in Computational Collective Intelligence - Krystian Wojtkiewicz
2021-09-29

This book constitutes refereed proceedings of the 13th International Conference on International Conference on Computational Collective Intelligence, ICCCI 2021, held in Kallithea, Rhodes, Greece, in October - November 2021. Due to the the COVID-19 pandemic the conference was held online. The 44 full papers and 14 short papers were thoroughly reviewed and selected from 231 submissions. The papers are organized according to the following topical sections: □□social networks and recommender systems; collective decision-making; computer vision techniques; innovations in intelligent systems; cybersecurity intelligent methods; data mining and machine learning; machine learning in real-world data; Internet of Things and computational technologies for collective intelligence; smart industry and management systems; low resource languages processing; computational intelligence for multimedia understanding.

Psychiatry - John Geddes 2012-01-05

Rev. ed. of: *Psychiatry* / Michael Gelder, Richard Mayou, John Geddes. 3rd ed. c2005.

Developing Bots with Microsoft Bots Framework - Srikanth Machiraju 2017-12-06
Develop Intelligent Bots using Microsoft Bot framework (C# and Node.js), Visual Studio Enterprise & Code, Microsoft Azure and Cognitive Services. This book shows you how to develop great Bots, publish to Azure and register with Bot portal so that customers can connect and communicate using famous communication channels like Skype, Slack, Web and Facebook. You'll also learn how to build intelligence into Bots using Azure Cognitive Services like LUIS, OCR, Speech to Text and Web Search. Bots are the new face of user experience. Conversational User Interface provides many options to make user experience richer, innovative and engaging with email, text, buttons or voice as the medium for communication. Modern line of business applications can be replaced or associated with Intelligent Bots that can use data/history combined with Machine Intelligence to make user experience inclusive and exciting. With *Developing Bots with Microsoft Bots Framework*, you'll see just how simple Bot building can be. What You'll Learn Build Bots using MS Bot framework on Windows and Non-Windows platforms Publish your Bot to the cloud in minutes Create rich communication platforms between your application and users Apply Artificial Intelligence and Machine Learning to your applications Who This Book Is For Developers and Architects who design and build modern applications or communication platforms using MS stack or open source technologies. Business Analysts and UX Specialists interested in designing and building trendy user interfaces/platforms using Bots and Azure ML

Deep Learning for Computer Vision - Jason Brownlee 2019-04-04

Step-by-step tutorials on deep learning neural networks for computer vision in python with Keras.

Intelligent Systems and Applications - Kohei Arai 2018-11-08

Gathering the Proceedings of the 2018 Intelligent Systems Conference (IntelliSys 2018), this book offers a remarkable collection of chapters covering a wide range of topics in intelligent systems and computing, and their real-world applications. The Conference attracted a total of 568 submissions from pioneering researchers, scientists, industrial engineers, and students from all around the world. These submissions underwent a double-blind peer review process, after which 194 (including 13 poster papers) were selected to be included in these proceedings. As intelligent systems continue to replace and sometimes outperform human intelligence in decision-making processes, they have made it possible to tackle many problems more effectively. This branching out of computational intelligence in several directions, and the use of intelligent systems in everyday applications, have created the need for such an international conference, which serves as a venue for reporting on cutting-edge innovations and developments. This book collects both theory and application-based chapters on all aspects of artificial intelligence, from classical to intelligent scope. Readers are sure to find the book both interesting and valuable, as it presents state-of-the-art intelligent methods and techniques for solving real-world problems, along with a vision of future research directions.

Data-Centric Business and Applications - Aneta Poniszewska-Marańda 2019-12-14

This book explores various aspects of software creation and development as well as data and information processing. It covers relevant topics such as business analysis, business rules, requirements engineering, software development processes, software defect prediction, information management systems, and knowledge management solutions. Lastly, the book presents lessons learned in information and data management processes and procedures.

Building Bots with Microsoft Bot Framework - Kishore Gaddam 2017-05-31

Build intelligent and smart conversational interfaces using Microsoft Bot Framework About This Book Develop various real-world intelligent bots from scratch using Microsoft Bot Framework Integrate your bots with most popular conversation platforms such as Skype, Slack, and Facebook Messenger Flaunt your bot building skills in your organization by thoroughly understanding and implementing the bot development concepts such as messages (rich text and pictures), dialogs, and third-party authentication and calling Who This Book Is For This book is for developers who are keen on building powerful services with great and interactive bot interface. Experience with C# is needed. What You Will Learn Set up a development environment and install all the required software to get started programming a bot Publish a bot to Slack, Skype, and the Facebook Messenger platform Develop a fully functional weather bot that communicates the current weather in a given city Help your bot identify the intent of a text with the help of LUIS in order to make decisions Integrate an API into your bot development Build an IVR solution Explore the concept of MicroServices and see how MicroServices can be used in bot development Develop an IoT project, deploy it, and connect it to a bot In Detail Bots help users to use the language as a UI and interact with the applications from any platform. This book teaches you how to develop real-world bots using Microsoft Bot Framework. The book starts with setting up the Microsoft Bot Framework

development environment and emulator, and moves on to building the first bot using Connector and Builder SDK. Explore how to register, connect, test, and publish your bot to the Slack, Skype, and Facebook Messenger platforms. Throughout this book, you will build different types of bots from simple to complex, such as a weather bot, a natural speech and intent processing bot, an Interactive Voice Response (IVR) bot for a bank, a facial expression recognition bot, and more from scratch. These bots were designed and developed to teach you concepts such as text detection, implementing LUIS dialogs, Cortana Intelligence Services, third-party authentication, Rich Text format, Bot State Service, and microServices so you can practice working with the standard development tools such as Visual Studio, Bot Emulator, and Azure. Style and approach This step-by-step guide takes a learn-while-doing approach, delivering the practical knowledge and experience you need to design and build real-world Bots. The concepts come to you on an as-needed basis while developing a bot so you increase your programming knowledge and experience at the same time.

Handbook on Decision Making - Julian Andres Zapata-Cortes 2022-10-28

This book presents different techniques and methodologies used to improve the intelligent decision-making process and increase the likelihood of success in companies of different sectors such as Financial Services, Education, Supply Chain, Energy Systems, Health Services, and others. The book contains and consolidates innovative and high-quality research contributions regarding the implementation of techniques and methodologies applied in different sectors. The scope is to disseminate current trends knowledge in the implementation of artificial intelligence techniques and methodologies in different fields such as: Logistics, Software Development, Big Data, Internet of Things, Simulation, among others. The book contents are useful for Ph.D. researchers, Ph.D. students, master and undergraduate students of different areas such as Industrial Engineering, Computer Science, Information Systems, Data Analytics, and others.

Audio- and Video-Based Biometric Person Authentication - Josef Bigun 2003-05-15

This book constitutes the refereed proceedings of the Third International Conference on Audio- and Video-Based Biometric Person Authentication, AVBPA 2001, held in Halmstad, Sweden in June 2001. The 51 revised papers presented together with three invited papers were carefully reviewed and selected for inclusion in the book. The papers are organized in topical sections on face as biometrics; face image processing; speech as biometrics and speech processing; fingerprints as biometrics; gait as biometrics; and hand, signature, and iris as biometrics.

High-Performance Modelling and Simulation for Big Data Applications - Joanna Kołodziej 2019-03-25

This open access book was prepared as a Final Publication of the COST Action IC1406 "High-Performance Modelling and Simulation for Big Data Applications (cHiPSet)" project. Long considered important pillars of the scientific method, Modelling and Simulation have evolved from traditional discrete numerical methods to complex data-intensive continuous analytical optimisations. Resolution, scale, and accuracy have become essential to predict and analyse natural and complex systems in science and engineering. When their level of

abstraction raises to have a better discernment of the domain at hand, their representation gets increasingly demanding for computational and data resources. On the other hand, High Performance Computing typically entails the effective use of parallel and distributed processing units coupled with efficient storage, communication and visualisation systems to underpin complex data-intensive applications in distinct scientific and technical domains. It is then arguably required to have a seamless interaction of High Performance Computing with Modelling and Simulation in order to store, compute, analyse, and visualise large data sets in science and engineering. Funded by the European Commission, cHiPSet has provided a dynamic trans-European forum for their members and distinguished guests to openly discuss novel perspectives and topics of interests for these two communities. This cHiPSet compendium presents a set of selected case studies related to healthcare, biological data, computational advertising, multimedia, finance, bioinformatics, and telecommunications.

Microsoft Azure AI: A Beginner's Guide - Rekha Kodali 2022-04-21

Explore Azure AI Platform KEY FEATURES ● Easy-to-follow tutorial for getting started with the Azure AI platform. ● Integrated platform for developing, deploying, and managing AI apps. ● Includes real-world scenarios and use-cases to fully explore Azure AI Platform. DESCRIPTION Microsoft Azure AI A Beginner's Guide explains the fundamentals of Azure AI and some more advanced topics. The sole objective of the book is to provide hands-on experience working with the various services, APIs, and tools available in the Azure AI Platform. This book begins by discussing the fundamentals of the Azure AI platform and the essential principles behind the Azure AI ecosystem and services. Readers will become familiar with the essential services, use cases, and examples provided by Azure AI Platform and Services, including Azure Cognitive Services, Azure Computer Vision, Azure Applied AI Services, and Azure Machine Learning. The author focuses on teaching how to utilize Azure Cognitive services to construct intelligent apps, including Image Processing, Object Detection, Text Recognition, OCR, Spatial Analysis, and Face Recognition using Computer Vision. Readers can investigate Azure Applied AI Services, including Form Recognizer, Metrics Advisor, Cognitive Search, Immersive Reader, Video Analyzer, and Azure Bot Service. Bot Framework and the Bot Framework Emulator will be explored in further detail, and how they can be used in AI applications to improve their conversational user interfaces. With Azure Machine Learning Studio, you will also learn to incorporate machine learning into your enterprise-level applications. WHAT YOU WILL LEARN ● Get familiar with Azure AI Platform and the cognitive capabilities of Azure. ● Learn to create apps that can process photos, detect faces, and detect objects. ● Utilize OCR, handwriting recognition, and spatial analysis in your development. ● Learn about Azure AI services like Form Recognizer, Metrics Advisor, Cognitive Search, Azure Immersive Reader, and Video Analyzer. ● Try out several NLP applications with the Azure BOT framework. WHO THIS BOOK IS FOR This book teaches AI developers, machine learning engineers, .NET developers, and architects how to swiftly develop intelligent applications utilizing the Azure AI Platform. Knowledge of .NET or .NET Core is strongly advised to get the most out of the book. TABLE OF CONTENTS 1 .Azure AI Platform and Services 2. Azure Computer Vision - Image

Analysis, Processing, Content Moderation, Object and Face Detection 3. Computer Vision - Text Recognition, Optical Character Recognition, Spatial Analysis 4. Azure Cognitive Services - Custom Applications leveraging Decision, Language, Speech, Web Search 5. Azure Applied AI Services 6. Azure Applied AI Services - BOTs- A Brief Introduction 7. Machine Learning-Infusing ML in Custom Applications using ML.NET 8. Machine Learning - Using Azure ML Studio

Practical Machine Learning with Rust - Joydeep Bhattacharjee 2019-12-10

Explore machine learning in Rust and learn about the intricacies of creating machine learning applications. This book begins by covering the important concepts of machine learning such as supervised, unsupervised, and reinforcement learning, and the basics of Rust. Further, you'll dive into the more specific fields of machine learning, such as computer vision and natural language processing, and look at the Rust libraries that help create applications for those domains. We will also look at how to deploy these applications either on site or over the cloud. After reading Practical Machine Learning with Rust, you will have a solid understanding of creating high computation libraries using Rust. Armed with the knowledge of this amazing language, you will be able to create applications that are more performant, memory safe, and less resource heavy.

What You Will Learn

- Write machine learning algorithms in Rust
- Use Rust libraries for different tasks in machine learning
- Create concise Rust packages for your machine learning applications
- Implement NLP and computer vision in Rust
- Deploy your code in the cloud and on bare metal servers

Who This Book Is For

Machine learning engineers and software engineers interested in building machine learning applications in Rust.

Text Analytics with Python - Dipanjan Sarkar 2019-05-21

Leverage Natural Language Processing (NLP) in Python and learn how to set up your own robust environment for performing text analytics. This second edition has gone through a major revamp and introduces several significant changes and new topics based on the recent trends in NLP. You'll see how to use the latest state-of-the-art frameworks in NLP, coupled with machine learning and deep learning models for supervised sentiment analysis powered by Python to solve actual case studies. Start by reviewing Python for NLP fundamentals on strings and text data and move on to engineering representation methods for text data, including both traditional statistical models and newer deep learning-based embedding models. Improved techniques and new methods around parsing and processing text are discussed as well. Text summarization and topic models have been overhauled so the book showcases how to build, tune, and interpret topic models in the context of an interest dataset on NIPS conference papers. Additionally, the book covers text similarity techniques with a real-world example of movie recommenders, along with sentiment analysis using supervised and unsupervised techniques. There is also a chapter dedicated to semantic analysis where you'll see how to build your own named entity recognition (NER) system from scratch. While the overall structure of the book remains the same, the entire code base, modules, and chapters has been updated to the latest Python 3.x release.

What You'll Learn

- Understand NLP and text syntax, semantics and structure
- Discover text cleaning and feature engineering
- Review text classification and text clustering
- Assess text summarization and topic

models• Study deep learning for NLP Who This Book Is For IT professionals, data analysts, developers, linguistic experts, data scientists and engineers and basically anyone with a keen interest in linguistics, analytics and generating insights from textual data.

Hands-on Azure Functions with C# - Ashirwad Satapathi 2021-08-19

Build serverless solutions using Azure Functions. This book provides you with a deep understanding of Azure Functions so you can build highly scalable and reliable serverless applications. The book starts with an introduction to Azure Functions and demonstrates triggers and bindings with use cases. The process to build an OTP mailer with Queue Storage Trigger and SendGrid output binding is presented, and timer triggers and blob storage binding are covered. Creating custom binding for Azure Functions and building a serverless API using Azure Functions and Azure SQL are discussed. You will know how to build a serverless API using Azure Functions and Azure Cosmos DB, and you will go over enabling application insights and Azure Monitor. Storing function secrets in Azure Key Vault is discussed as well as authentication and authorization using Azure Active Directory. You will learn how to secure your serverless apps using API Management and deploy your Azure Functions using IDEs. Deploying your Azure Functions using CI/CD pipelines is demonstrated along with running Azure Functions in containers. You will learn how to leverage Azure Cognitive Services to build intelligent serverless apps. And the authors introduce you to Azure Durable functions and teach you how to integrate Azure Functions in the logic app workflow. They also discuss best practices and pitfalls to avoid while designing Azure Functions. After reading this book, you will be able to design and deploy Azure Functions and implement solutions to real-world business problems through serverless applications. What Will You Learn Monitor and secure Azure Functions Build and deploy Azure Functions Enable continuous integration/continuous deployment (CI/CD) DevOps strategies for Azure Functions Run Azure Functions on Azure Kubernetes Cluster Who This Book Is For Experienced developers, cloud architects, and tech enthusiasts in Azure

Augmented Reality with Kinect - Rui Wang 2013-01-01

This book is a mini tutorial with plenty of code examples and strategies to give you many options when building your own applications. This book is meant for readers who are familiar with C/C++ programming and want to write simple programs with Kinect. The standard template library can also be used as it is simple enough to understand.

Beginning Kinect Programming with the Microsoft Kinect SDK - Jarrett Webb 2012-06-12

Beginning Kinect Programming with the Microsoft Kinect SDK gets you up and running developing Kinect applications for your PC using Microsoft tools and the official SDK. You will have a working Kinect program by the end of the first chapter! The following chapters will open up the secrets of three-dimensional vision, skeleton tracking, audio through the Kinect, and more. Examples illustrate the concepts in the form of simple games that react to your body movements. The result is a fun read that helps you learn one of the hottest technologies out there today. Beginning Kinect Programming with the Microsoft Kinect SDK also provides building blocks and ideas for mashing up the Kinect with other technologies to create art, interactive games, 3D models and

enhanced office automation. You'll learn the fundamental code basic to almost all Kinect applications. You'll learn to integrate that code with other tools and manipulate data to create amazing Kinect applications. Beginning Kinect Programming with the Microsoft Kinect SDK is your gateway into the exciting world of three-dimensional, real-time computer interaction. Helps you create a proper development environment for Kinect applications. Covers the basics of three-dimensional vision, skeleton tracking, gesture recognition, and audio Provides fun examples that keep you engaged and learning

Advanced Computational Intelligence in Healthcare-7 - Ilias Maglogiannis
2020-03-23

This book presents state-of-the-art works and systematic reviews in the emerging field of computational intelligence (CI) in electronic health care. The respective chapters present surveys and practical examples of artificial intelligence applications in the areas of Human-Machine Interface (HMI) and affective computing, machine learning, big health data and visualization analytics, computer vision and medical image analysis. The book also addresses new and emerging topics in CI for health care such as the utilization of Social Media (SM) and the introduction of new intelligent paradigms in the security and privacy domains, which are critical for the health sector. The chapters, while of course not exhaustively addressing all the possible aspects of the aforementioned areas, are indicative of the dynamic nature of interdisciplinary research being pursued. Accordingly, the book is intended not only for researchers in the respective fields, but also for medical and administrative personnel working in the health sector, as well as managers and stakeholders responsible for making strategic decisions and defining public health policies.

Briggs - Barry Briggs 2016-01-07

How do you start? How should you build a plan for cloud migration for your entire portfolio? How will your organization be affected by these changes? This book, based on real-world cloud experiences by enterprise IT teams, seeks to provide the answers to these questions. Here, you'll see what makes the cloud so compelling to enterprises; with which applications you should start your cloud journey; how your organization will change, and how skill sets will evolve; how to measure progress; how to think about security, compliance, and business buy-in; and how to exploit the ever-growing feature set that the cloud offers to gain strategic and competitive advantage.

Azure for Architects - Ritesh Modi 2017-10-20

Your one stop guide to making the most out of Azure Cloud About This Book Get familiar with the different design patterns available in Microsoft Azure Develop Azure cloud architecture and a pipeline management system Get to know the security best practices for your Azure deployment Who This Book Is For If you are Cloud Architects, DevOps Engineers, or developers who want to learn key architectural aspects of the Azure Cloud platform, then this book is for you. Prior basic knowledge of the Azure Cloud platform is good to have. What You Will Learn Familiarize yourself with the components of the Azure Cloud platform Understand the cloud design patterns Use enterprise security guidelines for your Azure deployment Design and implement Serverless solutions See Cloud architecture and the deployment pipeline Understand cost management for Azure solutions In Detail Over the years, Azure cloud services has grown quickly, and

the number of organizations adopting Azure for their cloud services is also gradually increasing. Leading industry giants are finding that Azure fulfills their extensive cloud requirements. This book will guide you through all the important and tough decision-making aspects involved in architecting a Azure public cloud for your organization. The book starts with an extensive introduction to all the categories of designs available with Azure. These design patterns focus on different aspects of cloud such as high availability, data management, and so on. Gradually, we move on to various aspects such as building your cloud structure and architecture. It will also include a brief description about different types of services provided by Azure, such as Azure functions and Azure Analytics, which can prove beneficial for an organization. This book will cover each and every aspect and function required to develop a Azure cloud based on your organizational requirements. By the end of this book, you will be in a position to develop a full-fledged Azure cloud. Style and approach This hands-on guide to the Azure Cloud platform covers different architectural concepts and implementations necessary for any enterprise scale deployment.

Programming for the Internet of Things - Dawid Borycki 2017-05-26

Rapidly implement Internet of Things solutions Creating programs for the Internet of Things offers you an opportunity to build and program custom devices whose functionality is limited only by your imagination. This book teaches you to do exactly that, with solutions presented in a step-by-step format. When you read this book, you not only learn the fundamentals of device programming, you will also be ready to write code for revolutionizing devices and robots. You don't need to be an expert in low-level programming to benefit from this book. It explains basic concepts and programming techniques before diving into the more complicated topics. Each of the book's chapters and appendices contains a suitable level of detail to help you quickly master device programming. MCP Dawid Borycki shows you how to: Build Universal Windows Platform (UWP) applications that target interconnected embedded devices Design and implement background apps for seamless integration with hardware components Use intrinsic UWP functionality to detect and track human faces Build artificial auditory, visual, and learning systems Process audio signals to blink LEDs to the rhythm of music Use OpenCV to develop custom image-processing algorithms Communicate with external devices by using serial, USB, Wi-Fi, and AllJoyn connectivity Design and implement applications to control DC, stepper, and servo motors for robotics Use Microsoft Cognitive Services to detect human emotions Build predictive analysis and preventive maintenance systems by using the Azure IoT Suite

Machine Learning with Microsoft Technologies - Leila Etaati 2019-06-12

Know how to do machine learning with Microsoft technologies. This book teaches you to do predictive, descriptive, and prescriptive analyses with Microsoft Power BI, Azure Data Lake, SQL Server, Stream Analytics, Azure Databricks, HD Insight, and more. The ability to analyze massive amounts of real-time data and predict future behavior of an organization is critical to its long-term success. Data science, and more specifically machine learning (ML), is today's game changer and should be a key building block in every company's strategy. Managing a machine learning process from business understanding, data

acquisition and cleaning, modeling, and deployment in each tool is a valuable skill set. Machine Learning with Microsoft Technologies is a demo-driven book that explains how to do machine learning with Microsoft technologies. You will gain valuable insight into designing the best architecture for development, sharing, and deploying a machine learning solution. This book simplifies the process of choosing the right architecture and tools for doing machine learning based on your specific infrastructure needs and requirements. Detailed content is provided on the main algorithms for supervised and unsupervised machine learning and examples show ML practices using both R and Python languages, the main languages inside Microsoft technologies. What You'll Learn Choose the right Microsoft product for your machine learning solution Create and manage Microsoft's tool environments for development, testing, and production of a machine learning project Implement and deploy supervised and unsupervised learning in Microsoft products Set up Microsoft Power BI, Azure Data Lake, SQL Server, Stream Analytics, Azure Databricks, and HD Insight to perform machine learning Set up a data science virtual machine and test-drive installed tools, such as Azure ML Workbench, Azure ML Server Developer, Anaconda Python, Jupyter Notebook, Power BI Desktop, Cognitive Services, machine learning and data analytics tools, and more Architect a machine learning solution factoring in all aspects of self service, enterprise, deployment, and sharing Who This Book Is For Data scientists, data analysts, developers, architects, and managers who want to leverage machine learning in their products, organization, and services, and make educated, cost-saving decisions about their ML architecture and tool set.

Artificial Intelligence for .NET: Speech, Language, and Search - Nishith Pathak
2017-08-14

Get introduced to the world of artificial intelligence with this accessible and practical guide. Build applications that make intelligent use of language and user interaction to better compete in today's marketplace. Discover how your application can deeply understand and interpret content on the web or a user's machine, intelligently react to direct user interaction through speech or text, or make smart recommendations on products or services that are tailored to each individual user. With Microsoft Cognitive Services, you can do all this and more utilizing a set of easy-to-use APIs that can be consumed on the desktop, web, or mobile devices. Developers normally think of AI implementation as a tough task involving writing complex algorithms. This book aims to remove the anxiety by creating a cognitive application with a few lines of code. There is a wide range of Cognitive Services APIs available. This book focuses on some of the most useful and powerful ways that your application can make intelligent use of language. Artificial Intelligence for .NET: Speech, Language, and Search will show you how you can start building amazing capabilities into your applications today. What You'll Learn Understand the underpinnings of artificial intelligence through practical examples and scenarios Get started building an AI-based application in Visual Studio Build a text-based conversational interface for direct user interaction Use the Cognitive Services Speech API to recognize and interpret speech Look at different models of language, including natural language processing, and how to apply them in your Visual Studio application Reuse Bing search capabilities to better understand a

user's intention Work with recommendation engines and integrate them into your apps Who This Book Is For Developers working on a range of platforms, from .NET and Windows to mobile devices. Examples are given in C#. No prior experience with AI techniques or theory is required.

Advances in Neural Computation, Machine Learning, and Cognitive Research III - Boris Kryzhanovsky 2019-09-03

This book describes new theories and applications of artificial neural networks, with a special focus on answering questions in neuroscience, biology and biophysics and cognitive research. It covers a wide range of methods and technologies, including deep neural networks, large scale neural models, brain computer interface, signal processing methods, as well as models of perception, studies on emotion recognition, self-organization and many more. The book includes both selected and invited papers presented at the XXI International Conference on Neuroinformatics, held on October 7-11, 2019, in Dolgoprudny, a town in Moscow region, Russia.

The Handbook on Socially Interactive Agents - Birgit Lugin 2022-10-19

The Handbook on Socially Interactive Agents provides a comprehensive overview of the research fields of Embodied Conversational Agents; Intelligent Virtual Agents; and Social Robotics. Socially Interactive Agents (SIAs); whether virtually or physically embodied; are autonomous agents that are able to perceive an environment including people or other agents; reason; decide how to interact; and express attitudes such as emotions; engagement; or empathy. They are capable of interacting with people and one another in a socially intelligent manner using multimodal communicative behaviors; with the goal to support humans in various domains. Written by international experts in their respective fields; the book summarizes research in the many important research communities pertinent for SIAs; while discussing current challenges and future directions. The handbook provides easy access to modeling and studying SIAs for researchers and students; and aims at further bridging the gap between the research communities involved. In two volumes; the book clearly structures the vast body of research. The first volume starts by introducing what is involved in SIAs research; in particular research methodologies and ethical implications of developing SIAs. It further examines research on appearance and behavior; focusing on multimodality. Finally; social cognition for SIAs is investigated using different theoretical models and phenomena such as theory of mind or pro-sociality. The second volume starts with perspectives on interaction; examined from different angles such as interaction in social space; group interaction; or long-term interaction. It also includes an extensive overview summarizing research and systems of human-agent platforms and of some of the major application areas of SIAs such as education; aging support; autism; and games.

Trends in Artificial Intelligence and Computer Engineering - Miguel Botto-Tobar 2023-02-13

This book constitutes the proceedings of the 4th International Conference on Advances in Emerging Trends and Technologies (ICAETT 2022), held in Riobamba, Ecuador, on 26–28 October 2022, proudly organized by Facultad de Informática y Electrónica (FIE) at Escuela Superior Politécnica de Chimborazo and supported by GDEON. ICAETT 2022 brings together top researchers and practitioners working

in different domains of computer science to share their expertise and to discuss future developments and potential collaborations. Presenting high-quality, peer-reviewed papers, the book discusses the following topics: ● Artificial intelligence ● Communications ● e-Learning ● AT for engineering applications ● Security ● Technology trends

Deep Learning with Applications Using Python - Navin Kumar Manaswi 2018-04-04
Explore deep learning applications, such as computer vision, speech recognition, and chatbots, using frameworks such as TensorFlow and Keras. This book helps you to ramp up your practical know-how in a short period of time and focuses you on the domain, models, and algorithms required for deep learning applications. Deep Learning with Applications Using Python covers topics such as chatbots, natural language processing, and face and object recognition. The goal is to equip you with the concepts, techniques, and algorithm implementations needed to create programs capable of performing deep learning. This book covers convolutional neural networks, recurrent neural networks, and multilayer perceptrons. It also discusses popular APIs such as IBM Watson, Microsoft Azure, and scikit-learn. What You Will Learn Work with various deep learning frameworks such as TensorFlow, Keras, and scikit-learn. Use face recognition and face detection capabilities Create speech-to-text and text-to-speech functionality Engage with chatbots using deep learning Who This Book Is For Data scientists and developers who want to adapt and build deep learning applications.

Technology Trends - Miguel Botto-Tobar 2018-12-29

This book constitutes the refereed proceedings of the 4th International Conference on Technology Trends, CITT 2018, held in Babahoyo, Ecuador, in August 2018. The 53 revised full papers presented were carefully reviewed and selected from 204 submissions. The papers are organized in topical sections on communications; security and privacy; computer and software engineering; computational intelligence; e-government and e-participation.

2018 IEEE RSJ International Conference on Intelligent Robots and Systems (IROS)
- IEEE Staff 2018-10

The IEEE RSJ International Conference on Intelligent Robots and Systems (IROS) provides an international forum for worldwide robotics community to explore the frontier of science and technology in intelligent robots and smart machines, and to stimulate innovative ideas, exchange technological perspectives and assess future directions In addition to technical sessions and multi media presentations, IROS conferences also hold panel discussions, workshops, tutorials, exhibits and technical tours to enhance technical communications among the attendees

Threat Modeling - Izar Tarandach 2020-11-13

Threat modeling is one of the most essential--and most misunderstood--parts of the development lifecycle. Whether you're a security practitioner or a member of a development team, this book will help you gain a better understanding of how you can apply core threat modeling concepts to your practice to protect your systems against threats. Contrary to popular belief, threat modeling doesn't require advanced security knowledge to initiate or a Herculean effort to sustain. But it is critical for spotting and addressing potential concerns in a cost-effective way before the code's written--and before it's too late to

find a solution. Authors Izar Tarandach and Matthew Coles walk you through various ways to approach and execute threat modeling in your organization. Explore fundamental properties and mechanisms for securing data and system functionality Understand the relationship between security, privacy, and safety Identify key characteristics for assessing system security Get an in-depth review of popular and specialized techniques for modeling and analyzing your systems View the future of threat modeling and Agile development methodologies, including DevOps automation Find answers to frequently asked questions, including how to avoid common threat modeling pitfalls