

Building Intelligent Cloud Applications Develop S

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2021 International Conference on Applications and Techniques in Cyber Intelligence - Jemal Abawajy 2021-06-23

This book presents innovative ideas, cutting-edge findings, and novel techniques, methods, and applications in a broad range of cybersecurity and cyberthreat intelligence areas. As our society becomes smarter, there is a corresponding need to secure our cyberfuture. The book describes approaches and findings that are of interest to business professionals and governments seeking to secure our data and underpin infrastructures, as well as to individual users.

Beginning Azure IoT Edge Computing - David Jensen 2019-04-29

Use a step-by-step process to create and deploy your first Azure IoT Edge solution. Modern day developers and architects in today's cloud-focused world must understand when it makes sense to leverage the cloud.

Computing on the edge is a new paradigm for most people. The Azure IoT Edge platform uses many existing technologies that may be familiar to developers, but understanding how to leverage those technologies in an edge computing scenario can be challenging. Beginning Azure IoT Edge Computing demystifies computing on the edge and explains, through concrete examples and exercises, how and when to leverage the power of intelligent edge computing. It introduces the possibilities of intelligent edge computing using the Azure IoT Edge platform, and guides you through hands-on exercises to make edge computing approachable,

understandable, and highly useful. Through user-friendly discussion you will not only understand how to build edge solutions, but also when to build them. By explaining some common solution patterns, the decision on when to use the cloud and when to avoid the cloud will become much clearer.

What You'll Learn Create and deploy Azure IoT Edge solutions Recognize when to leverage the intelligent edge pattern and when to avoid it

Leverage the available developer tooling to develop and debug IoT Edge solutions Know which off-the-shelf edge computing modules are available Become familiar with some of the lesser-known device protocols used in conjunction with edge computing Understand how to securely deploy and bootstrap an IoT Edge device Explore related topics such as containers and secure device provisioning Who This Book Is For Developers or architects who want to understand edge computing and when and where to use it. Readers should be familiar with C# or Python and have a high-

level understanding of the Azure IoT platform.

Smartcells - Ahmad Karawash 2015

Cloud computing is the future of web technologies and the goal for all web companies as well. It reinforces some old concepts of building highly scalable Internet architectures and introduces some new concepts that entirely change the way applications are built and deployed. In the recent years, some technology companies adopted the cloud computing strategy. This adoption took place when these companies have predicted that cloud computing will be the solutions of Web problems such as availability.

However, organizations find it almost impossible to launch the cloud idea without adopting previous approaches like that of Service-Oriented approach. As a result of this dependency, web service problems are transferred into the cloud. Indeed, the current cloud's availability is too expensive due to service replication, some cloud services face performance problem, a majority of these services is weak regarding security, and cloud services are randomly discovered while it is difficult to precisely select the best ones in addition to being spontaneously fabricated in an ocean of services. Moreover, it is impossible to validate cloud services especially before runtime. Finally, according to the W3C standards, cloud services are not yet internationalized. Indeed, the predicted web is a smart service model while it lacks intelligence and autonomy. This is why the adoption of service-oriented model was not an ideal decision. In order to minimize the consequences of cloud problems and achieve more benefits, each cloud company builds its own cloud platform. Currently, cloud vendors are facing a big problem that can be summarized by the "Cloud Platform Battle". The budget of this battle will cost about billions of dollars due to the absence of an agreement to reach a standard cloud platform. Why intelligent collaboration is not applied between distributed clouds to achieve better Cloud Computing results? The appropriate approach is to restructure the cloud model basis to recover its issues. Multiple intelligent techniques may be used to develop advanced intelligent Cloud systems. Classical examples of distributed intelligent systems include: human body, social insect colonies, flocks of vertebrates, multi-agent systems, transportation systems, multi-robot systems, and wireless sensor networks. However, the intelligent system that could be imitated is the human body system, in which billions of body

cells work together to achieve accurate results. Inspired by Bio-Informatics strategy that benefits from technologies to solve biological facts (like our genes), this thesis research proposes a novel Bio-Cloud strategy which imitates biological facts (like brain and genes) in solving the Cloud Computing issues. Based on Bio-Cloud strategy, I have developed through this thesis project the "SmartCells" framework as a smart solution for Cloud problems. SmartCells framework covers: 1) Cloud problems which are inherited from the service paradigm (like issues of service reusability, security, etc.); 2) The intelligence insufficiency problem in Cloud Computing systems. SmartCells depends on collaborations between smart components (Cells) that take advantage of the variety of already built web service components to produce an intelligent Cloud system. Le « Cloud Computing » est certes le futur des technologies du web. Il renforce certains vieux concepts de construction d'architectures internet hautement évolutifs, et introduit de nouveaux concepts qui changent complètement la façon dont les applications sont développées et déployées. Au cours des dernières années, certaines entreprises technologiques ont adopté la stratégie du Cloud Computing. Cette adoption a eu lieu lorsque ces entreprises ont prédit que le Cloud Computing sera les solutions des plusieurs problèmes Web tels que la disponibilité. Toutefois, les organisations pensent qu'il est presque impossible de lancer l'idée du « Cloud » sans adopter les concepts et les normes antérieures comme celle du paradigme orienté service (Service-Oriented Paradigm). En raison de cette dépendance, les problèmes de l'approche orientée service et services web sont transférés au Cloud. En effet, la disponibilité du Cloud actuel s'avère trop chère à cause de la reproduction de services, certains services Cloud sont confrontés à des problèmes de performances, une majorité des services Cloud est faible en matière de sécurité, et ces services sont découverts d'une façon aléatoire, il est difficile de choisir le meilleur d'entre eux ainsi qu'ils sont composés d'un groupe de services web dans un monde de services. Egalement, il est impossible de valider les services Cloud en particulier, avant le temps d'exécution. Finalement, selon les normes du W3C, les services Cloud ne sont pas encore internationalisés. En effet, le web comme prévu, est un modèle de service intelligent bien qu'il manque d'intelligence et d'autonomie. Ainsi, l'adoption d'un modèle axé sur le service n'était pas une décision idéale. Afin de minimiser les conséquences des problèmes du Cloud et réaliser plus de profits, certaines entreprises de Cloud développent leurs propres plateformes de Cloud Computing. Actuellement, les fournisseurs du Cloud font face à un grand problème qui peut se résumer par la « Bataille de la plateforme Cloud ». Le budget de cette bataille coûte des milliards de dollars en l'absence d'un accord pour accéder à une plateforme Cloud standard. Pourquoi une collaboration intelligente n'est pas mise en place entre les nuages distribués pour obtenir de meilleurs résultats ? L'approche appropriée est de restructurer le modèle de cloud afin de couvrir ses problèmes. Des techniques intelligentes multiples peuvent être

utilisées pour développer des systèmes Cloud intelligents avancés. Parmi les exemples classiques de systèmes intelligents distribués se trouvent : le corps humain, les colonies d'insectes sociaux, les troupeaux de vertébrés, les systèmes multi-agents, les systèmes de transport, les systèmes multi-robots, et les réseaux de capteurs sans fils. Toutefois, le système intelligent qui pourrait être imité est le système du corps humain dans lequel vivent des milliards de cellules du corps et travaillent ensemble pour atteindre des résultats précis. En s'inspirant de la stratégie Bio-Informatique qui bénéficie de technologies pour résoudre des faits biologiques (comme les gènes). Cette thèse propose une nouvelle stratégie Bio-Cloud qui imite des faits biologiques (comme le cerveau et les gènes) pour résoudre les problèmes du Cloud Computing mentionnés ci-haut. Ainsi, en me basant sur la stratégie Bio-Cloud, j'ai développé au cours de cette thèse la théorie « SmartCells » conçue comme une proposition (approche) cherchant à résoudre les problèmes du Cloud Computing. Cette approche couvre : 1) les problèmes hérités du paradigme services (comme les questions de réutilisation de services, les questions de sécurité, etc.); 2) le problème d'insuffisance d'intelligence dans les systèmes du Cloud Computing. SmartCells se base sur la collaboration entre les composants intelligents (les Cellules) qui profitent de la variété des composants des services web déjà construits afin de produire un système de Cloud intelligent.

Exam Ref 70-535 Architecting Microsoft Azure Solutions - Haishi Bai
2018-06-04

Prepare for Microsoft Exam 70-535—and help demonstrate your real-world mastery of architecting complete cloud solutions on the Microsoft Azure platform. Designed for architects and other cloud professionals ready to advance their status, Exam Ref focuses on the critical thinking and decision-making acumen needed for success at the MCSA level. Focus on the expertise measured by these objectives: Design compute infrastructure Design data implementation Design networking implementation Design security and identity solutions Design solutions by using platform services Design for operations This Microsoft Exam Ref: Organizes its coverage by exam skills Features strategic, what-if scenarios to challenge you Includes DevOps and hybrid technologies and scenarios Assumes you have experience building infrastructure and applications on the Microsoft Azure platform, and understand the services it offers

International Conference on Applications and Techniques in Cyber Intelligence ATCI 2019 - Jemal H. Abawajy 2019-07-31

This book presents innovative ideas, cutting-edge findings, and novel techniques, methods, and applications in a broad range of cybersecurity and cyberthreat intelligence areas. As our society becomes smarter, there is a corresponding need to be able to secure our cyberfuture. The approaches and findings described in this book are of interest to businesses and governments seeking to secure our data and underpin infrastructures, as well as to individual users.

Practical Azure Application Development - Thurupathan Vijayakumar

2020-08-07

Get started and learn a step-by-step approach to application development using Microsoft Azure. Select the right services to solve the problem at hand in a cost-effective manner and explore the many services designed to help you in building enterprise applications. This new edition covers Azure PaaS and serverless cloud native solutions and gives you the holistic approach to Azure as a solutions development platform. It discusses recent developments in cloud applications and architecture such as the modern application development landscape and serverless middleware. You will learn about web application development in Azure PaaS with modern JavaScript. Since the last edition was based on the legacy .NET Framework, *Practical Azure Application Development* has been updated with significant ASP.NET Core changes. Also new in this edition: production-ready setup with traffic flow and configuration of the application with production-ready features. Finally, you'll cover extended architecture patterns to see how you can integrate additional services with the application. After reading this book, you will be able to build complete business solutions on Azure using different services. What You Will Learn Discover end-to-end solution design and development in Azure Integrate additional services with the application Understand the basics of security, data protection, and cost controls in Azure Who This Book Is For Developers and architects who have experience in .NET and web development, but have little or no knowledge in planning and developing an application on Azure.

Google Cloud Platform for Developers - Ted Hunter 2018-07-30

Develop, deploy, and scale your applications with Google Cloud Platform Key Features Create and deploy your applications on Google Cloud Platform Store and manage source code and debug Cloud-hosted apps with plugins and IDEs Streamline developer workflows with tools for alerting and managing deployments Book Description Google Cloud Platform (GCP) provides autoscaling compute power and distributed in-memory cache, task queues, and datastores to write, build, and deploy Cloud-hosted applications. With *Google Cloud Platform for Developers*, you will be able to develop and deploy scalable applications from scratch and make them globally available in almost any language. This book will guide you in designing, deploying, and managing applications running on Google Cloud. You'll start with App Engine and move on to work with Container Engine, compute engine, and cloud functions. You'll learn how to integrate your new applications with the various data solutions on GCP, including Cloud SQL, Bigtable, and Cloud Storage. This book will teach you how to streamline your workflow with tools such as Source Repositories, Container Builder, and StackDriver. Along the way, you'll see how to deploy and debug services with IntelliJ, implement continuous delivery pipelines, and configure robust monitoring and alerting for your production systems. By the end of this book, you'll be well-versed with all

the development tools of Google Cloud Platform, and you'll develop, deploy, and manage highly scalable and reliable applications. What you will learn Understand the various service offerings on GCP Deploy and run services on managed platforms such as App Engine and Container Engine Securely maintain application states with Cloud Storage, Datastore, and Bigtable Leverage StackDriver monitoring and debugging to minimize downtime and mitigate issues without impacting users Design and implement complex software solutions utilizing Google Cloud Integrate with best-in-class big data solutions such as Bigquery, Dataflow, and Pub/Sub Who this book is for *Google Cloud Platform for Developers* is for application developers. This book will enable you to fully leverage the power of Google Cloud Platform to build resilient and intelligent software solutions.

Hands-On Artificial Intelligence on Google Cloud Platform - Anand

Deshpande 2020-03-06

Developing Cloud-Native Solutions with Microsoft Azure and .NET -

Ashirwad Satapathi 2022-12-22

Build and deploy applications by leveraging Azure PaaS and serverless services using Azure DevOps and GitHub Actions. This book provides step-by-step explanations of essential concepts, practical examples, and self-assessment questions that will help you gain the necessary expertise to build cloud-native solutions using Microsoft Azure and .NET. The book starts with essential topics that will help get you familiar with the fundamental concepts of Azure, followed by example-based guides on building distributed solutions using Azure Web App, Azure Messaging, and communication services. You will then learn how to implement the knowledge you've thus far gained to build containerized workloads using Azure Container-based services. Next, you will focus on building solutions by using Azure Storage and Data services, where you will go through Azure Blob Storage and learn how to interact with Azure Cosmos DB from applications using the .NET SDK. Moving forward, you will explore how to build intelligent applications using Azure AI and IoT services, including Azure Cognitive Services. In the book's final section, you will explore ways to deploy applications using Azure DevOps and GitHub Actions. After reading this book, you will be able to build scalable, enterprise-grade applications using various Azure services. What You Will Learn Build an ASP.NET 6 Web API to send messages to Azure Service Bus Queue Use and implement Azure Communication Services Build and containerize a .NET API Understand IoT solutions using Azure IoT Hub, Azure Functions, and Azure Cosmos DB Who This Book Is For Experienced developers and cloud architects working with Microsoft Azure.

Web Applications on Azure - Rob Reagan 2017-12-11

Build .NET apps on Microsoft Azure services that can grow to Internet scale. Learn how you can make smart application architecture decisions and follow best practices so that your website can handle tens of

thousands of concurrent users and deliver your content globally. Author Rob Reagan takes you through key Azure technologies targeted toward building web applications, and along the way shares his lessons learned in scaling out a real-world web application. After an overview of web application building blocks, the book dives into relational and NoSQL data storage options on Azure, including Azure Table Storage and CosmosDB. You'll then discover how to make best use of Redis Cache, Web Jobs, Messaging Queues, and more, alongside other tips, tricks, and troubleshooting advice for when things go wrong. The book concludes with a thorough exploration of best practices for deployment at scale. What You'll Learn Develop scalable architecture patterns on Azure with ASP.NET MVC Understand the pros and cons of using SQL Azure vs. NoSQL solutions (Azure Tables, CosmosDB) Perform data migration, backup, and recovery in SQL Azure Use effective caching Troubleshoot your web applications Know best practices for deployment Who This Book Is For Professional developers or serious hobbyists with experience developing web applications with ASP.NET MVC or Web API

Computational Techniques for Text Summarization based on Cognitive Intelligence - V. Priya 2023-03-17

The book is concerned with contemporary methodologies used for automatic text summarization. It proposes interesting approaches to solve well-known problems on text summarization using computational intelligence (CI) techniques including cognitive approaches. A better understanding of the cognitive basis of the summarization task is still an open research issue; an extent of its use in text summarization is highlighted for further exploration. With the ever-growing text, people in research have little time to spare for extensive reading, where summarized information helps for a better understanding of the context at a shorter time. This book helps students and researchers to automatically summarize the text documents in an efficient and effective way. The computational approaches and the research techniques presented guides to achieve text summarization at ease. The summarized text generated supports readers to learn the context or the domain at a quicker pace. The book is presented with reasonable amount of illustrations and examples convenient for the readers to understand and implement for their use. It is not to make readers understand what text summarization is, but for people to perform text summarization using various approaches. This also describes measures that can help to evaluate, determine, and explore the best possibilities for text summarization to analyse and use for any specific purpose. The illustration is based on social media and healthcare domain, which shows the possibilities to work with any domain for summarization. The new approach for text summarization based on cognitive intelligence is presented for further exploration in the field.

Google Cloud AI Services Quick Start Guide - Arvind Ravulavaru 2018-05-30

Leverage the power of various Google Cloud AI Services by building a

smart web application using MEAN Stack Key Features Start working with the Google Cloud Platform and the AI services it offers Build smart web applications by combining the power of Google Cloud AI services and the MEAN stack Build a web-based dashboard of smart applications that perform language processing, translation, and computer vision on the cloud Book Description Cognitive services are the new way of adding intelligence to applications and services. Now we can use Artificial Intelligence as a service that can be consumed by any application or other service, to add smartness and make the end result more practical and useful. Google Cloud AI enables you to consume Artificial Intelligence within your applications, from a REST API. Text, video and speech analysis are among the powerful machine learning features that can be used. This book is the easiest way to get started with the Google Cloud AI services suite and open up the world of smarter applications. This book will help you build a Smart Exchange, a forum application that will let you upload videos, images and perform text to speech conversions and translation services. You will use the power of Google Cloud AI Services to make our simple forum application smart by validating the images, videos, and text provided by users to Google Cloud AI Services and make sure the content which is uploaded follows the forum standards, without a human curator involvement. You will learn how to work with the Vision API, Video Intelligence API, Speech Recognition API, Cloud Language Process, and Cloud Translation API services to make your application smarter. By the end of this book, you will have a strong understanding of working with Google Cloud AI Services, and be well on the way to building smarter applications. What you will learn Understand Google Cloud Platform and its Cloud AI services Explore the Google ML Services Work with an Angular 5 MEAN stack application Integrate Vision API, Video Intelligence API for computer vision Be ready for conversational experiences with the Speech Recognition API, Cloud Language Process and Cloud Translation API services Build a smart web application that uses the power of Google Cloud AI services to make apps smarter Who this book is for This book is ideal for data professionals and web developers who want to use the power of Google Cloud AI services in their projects, without the going through the pain of mastering machine learning for images, videos and text. Some familiarity with the Google Cloud Platform will be helpful.

Image and Video Technology - Shin'ichi Satoh 2018-06-07

This book constitutes the thoroughly refereed post-conference proceedings of five international workshops held in the framework of the 8th Pacific-Rim Symposium on Image and Video Technology, PSIVT 2017, in Wuhan, China, in November 2017: Workshop on Human Behavior Analysis; Workshop on Educational Cloud and Image/Video Enriched Cloud Services, ECIVECS; Workshop: Vision Meets Graphics, VG; Workshop on Active Electro-Optical Sensors for Aerial and Space Imaging, EO4AS; and Workshop on Computer Vision and Modern Vehicles, CVMV. The 34

revised full papers and 2 posters presented were carefully selected from 103 submissions. The papers cover the full range of state-of-the-art research in image and video technology with topics ranging from well-established areas to novel current trends.

Intelligent Cloud Computing - Asma Al-Saidi 2015-06-04

This book constitutes the refereed post-conference proceedings of the First International Conference on Intelligent Cloud Computing, held in Muscat, Oman, in February 2014. The 10 revised full papers presented were carefully reviewed and selected from 18 submissions. The papers cover topics in the areas of resource management and energy efficiency and security. They include 5 invited talks from leading organizations working in cloud computing in Oman and in the region.

Advances in Intelligent Systems and Computing V - Natalya Shakhovska 2020-12-22

This book reports on new theories and applications in the field of intelligent systems and computing. It covers cutting-edge computational and artificial intelligence methods, advances in computer vision, big data, cloud computing, and computation linguistics, as well as cyber-physical and intelligent information management systems. The respective chapters are based on selected papers presented at the workshop on intelligent systems and computing, held during the International Conference on Computer Science and Information Technologies, CSIT 2020, which was jointly organized on September 23-26, 2020, by the Lviv Polytechnic National University, Ukraine, the Kharkiv National University of Radio Electronics, Ukraine, and the Technical University of Lodz, Poland, under patronage of Ministry of Education and Science of Ukraine. Given its breadth of coverage, the book provides academics and professionals with extensive information and a timely snapshot of the field of intelligent systems, and is sure to foster new discussions and collaborations among different groups.

China's Urban Agglomerations - Chuanglin Fang 2020-01-03

The book combs through extensively 32,231 urban agglomeration related works during the past 120 years to explore a theoretically supported and practically based definition of urban agglomeration. Based on the definition, the authors explore intensively the fundamental characteristics, spatiotemporal differentiation properties, and existing issues for China's sustainable urban agglomeration development for the past 35 years. The study proposes that China shall focus on the construction and sustainable development of five primary national-level urban agglomerations. In the meantime, China shall also steadily and gradually construct 9 regional urban agglomerations and guide the development and growth of 6 local urban agglomerations. In the long run, China will have a hierarchical "5+9+6" closely integrated hierarchical urban agglomeration spatial structure. The study also proposes to coordinate the construction and development of urban agglomerations on the "two belts and one road" to form a national new urbanization development strategic pattern that

enables "the axis to connect the agglomerations while the agglomerations support the axis." Furthermore, the study investigates a variety of strategic thinking and suggestions for creating innovative, green and ecologically friendly, intelligent, low-carbon, open, culture-oriented, market-oriented and shared urban agglomerations in China. This book will be a comprehensive reference both for scholars and decision-makers engaged in urban development and planning and environmental protection departments. It can also serve as textbook for graduate students of relevant fields.

Developing Multi-Tenant Applications for the Cloud on Windows Azure - Dominic Betts 2013-03

How can you create an application that has truly global reach, and can scale rapidly to meet sudden massive spikes in demand? Historically, companies had to invest in an infrastructure capable of supporting such an application themselves, and plan for peak demand-which often means that much of the capacity sits idle for much of the time. Typically, only large companies would have the available resources to risk such an enterprise. The cloud has changed the rules of the game. By making infrastructure available on a "pay as you go" basis, creating a massively scalable, global application is within the reach of both large and small companies. Yes, by moving applications to the cloud you're giving up some control and autonomy, but you're also going to benefit from reduced costs, increased flexibility, and scalable computation and storage. This guide is the third release of the second volume in a series about Windows Azure. It demonstrates how you can create from scratch a multi-tenant, Software as a Service (SaaS) application to run in the cloud by using the Windows Azure tools and the increasing range of capabilities of Windows Azure. The guide focuses on both good practice design and the practicalities of implementation for multi-tenant applications, but also contains a wealth of information on factors such as security, scalability, availability, and elasticity that are relevant to all types of cloud hosted applications. The guide is intended for any architect, developer, or information technology (IT) professional who designs, builds, or operates applications and services that run on or interact with the cloud. Although applications do not need to be based on the Windows operating system to work in Windows Azure, or be written using a .NET language, this guide is written for people who work with Windows based systems. You should be familiar with the .NET Framework, Visual Studio, ASP.NET MVC, and Visual C#.

Azure AI Services at Scale for Cloud, Mobile, and Edge - Simon Bisson 2022-04-11

Take advantage of the power of cloud and the latest AI techniques. Whether you're an experienced developer wanting to improve your app with AI-powered features or you want to make a business process smarter by getting AI to do some of the work, this book's got you covered. Authors Anand Raman, Chris Hoder, Simon Bisson, and Mary Branscombe show you how to build practical intelligent applications for the cloud, mobile, browsers, and edge devices using a hands-on approach. This book shows

you how cloud AI services fit in alongside familiar software development approaches, walks you through key Microsoft AI services, and provides real-world examples of AI-oriented architectures that integrate different Azure AI services. All you need to get started is a working knowledge of basic cloud concepts. Become familiar with Azure AI offerings and capabilities Build intelligent applications using Azure Cognitive Services Train, tune, and deploy models with Azure Machine Learning, PyTorch, and the Open Neural Network Exchange (ONNX) Learn to solve business problems using AI in the Power Platform Use transfer learning to train vision, speech, and language models in minutes

Hands-On Machine Learning with Azure - Thomas K Abraham 2018-10-31
Implement machine learning, cognitive services, and artificial intelligence solutions by leveraging Azure cloud technologies Key Features Learn advanced concepts in Azure ML and the Cortana Intelligence Suite architecture Explore ML Server using SQL Server and HDInsight capabilities Implement various tools in Azure to build and deploy machine learning models Book Description Implementing Machine learning (ML) and Artificial Intelligence (AI) in the cloud had not been possible earlier due to the lack of processing power and storage. However, Azure has created ML and AI services that are easy to implement in the cloud. Hands-On Machine Learning with Azure teaches you how to perform advanced ML projects in the cloud in a cost-effective way. The book begins by covering the benefits of ML and AI in the cloud. You will then explore Microsoft's Team Data Science Process to establish a repeatable process for successful AI development and implementation. You will also gain an understanding of AI technologies available in Azure and the Cognitive Services APIs to integrate them into bot applications. This book lets you explore prebuilt templates with Azure Machine Learning Studio and build a model using canned algorithms that can be deployed as web services. The book then takes you through a preconfigured series of virtual machines in Azure targeted at AI development scenarios. You will get to grips with the ML Server and its capabilities in SQL and HDInsight. In the concluding chapters, you'll integrate patterns with other non-AI services in Azure. By the end of this book, you will be fully equipped to implement smart cognitive actions in your models. What you will learn Discover the benefits of leveraging the cloud for ML and AI Use Cognitive Services APIs to build intelligent bots Build a model using canned algorithms from Microsoft and deploy it as a web service Deploy virtual machines in AI development scenarios Apply R, Python, SQL Server, and Spark in Azure Build and deploy deep learning solutions with CNTK, MMLSpark, and TensorFlow Implement model retraining in IoT, Streaming, and Blockchain solutions Explore best practices for integrating ML and AI functions with ADLA and logic apps Who this book is for If you are a data scientist or developer familiar with Azure ML and cognitive services and want to create smart models and make sense of data in the cloud, this book is for you. You'll also find this book useful if you want to bring powerful machine

learning services into your cloud applications. Some experience with data manipulation and processing, using languages like SQL, Python, and R, will aid in understanding the concepts covered in this book

Development with the Force.com Platform - Jason Ouellette 2009-10-06
Foreword by Craig Weissman, CTO, Salesforce.com Build Cloud-Based Enterprise Applications Fast—and Drive More Value at Lower Cost! Using the Force.com platform, enterprise developers can build and deploy powerful applications far more rapidly than traditional J2EE, Microsoft .NET, or LAMP technology stacks permit. With a free subscription to the Force.com platform, developers can build apps that solve virtually any enterprise challenge with remarkable value, scalability, and reliability. This is the first book that brings together all the practical, technical guidance you need to make the most of Force.com in your own custom enterprise applications. Leading Force.com developer Jason Ouellette helps you identify suitable uses for Force.com and provides all the insights and sample code needed to rapidly prototype, deploy, and integrate with production-quality Force.com applications. Ouellette provides realistic code examples at every step, emphasizing maintainability, flexibility, and interoperability throughout. Writing for developers, architects, and analysts, he shows how to

- Create custom enterprise apps on Force.com in days or weeks, not months or years
- Leverage Force.com's extensive capabilities for storing, managing, and securing data
- Quickly create sophisticated business logic with the Apex programming language
- Use Visualforce to construct custom user interfaces
- Establish automated or semiautomated workflows
- Implement Ajax behaviors without writing JavaScript code or learning new JavaScript libraries
- Integrate Force.com-based data and processes with other applications, inside and outside the platform
- Display reports as state-of-the-art dashboards
- Integrate Force.com applications with existing Single Sign-On systems

This book's extensive sample code may be downloaded from Force.com AppExchange at

<http://sites.force.com/appexchange/listingDetail?listingId=a0N30000001SS3rEAG>

Azure AI Services at Scale for Cloud, Mobile, and Edge - Anand Raman 2022-08-16

Whether you're a student planning to focus on AI or an experienced software engineer with an idea for the next viral AI app, or if you want to make a business process smarter by getting AI to do some of the work, this book's got you covered. Authors Anand Raman, Chris Hoder, Simon Bisson, and Mary Branscombe show you how to build practical intelligent applications for the cloud, mobile, browsers, and edge devices using a hands-on approach. In three sections, this book introduces you to AI-oriented architecture, provides an overview of the available tools, and provides real-world examples to guide you through this architecture. All you need to get started is a working knowledge of basic cloud concepts. Become familiar with various AI offerings and capabilities Build intelligent

applications using Azure Cognitive Services Train, tune, and deploy models with Azure Machine Learning, PyTorch, and the Open Neural Network Exchange (ONNX) Learn about how companies have used Cognitive Services to solve business problems Use transfer learning to train vision, speech, and language models in minutes Discover how Microsoft scaled running Azure Cognitive Services for millions of users

Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing - Management Association, Information Resources 2021-01-25

Distributed systems intertwine with our everyday lives. The benefits and current shortcomings of the underpinning technologies are experienced by a wide range of people and their smart devices. With the rise of large-scale IoT and similar distributed systems, cloud bursting technologies, and partial outsourcing solutions, private entities are encouraged to increase their efficiency and offer unparalleled availability and reliability to their users. The Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing is a vital reference source that provides valuable insight into current and emergent research occurring within the field of distributed computing. It also presents architectures and service frameworks to achieve highly integrated distributed systems and solutions to integration and efficient management challenges faced by current and future distributed systems. Highlighting a range of topics such as data sharing, wireless sensor networks, and scalability, this multi-volume book is ideally designed for system administrators, integrators, designers, developers, researchers, academicians, and students.

COVID 19, Containment, Life, Work and Restart - T. M. Vinod Kumar 2022-10-05

This book is about containment, life, work, and restart regions affected by COVID 19, using selected empirical case studies. This book presents the spread of coronavirus spatially and temporally, analyses containment strategies and includes recommended strategies. Further, it analyses how life and work get transformed during the lockdown, and gradual opening up, and presents the future of work and life in cities impacted by COVID-19. This book discusses the concept of smart life and works in cities post-COVID-19 such that they do not reduce the quality of work and life and cannot create adverse economic and living consequences called the restart of a city after COVID-19. Selected Regions of special interest are studied. Special interest is because Kerala and Maharashtra got the worst affected in India by COVID 19 pandemic and the book focus on that.

Building Machine Learning and Deep Learning Models on Google Cloud Platform - Ekaba Bisong 2019-09-27

Take a systematic approach to understanding the fundamentals of machine learning and deep learning from the ground up and how they are applied in practice. You will use this comprehensive guide for building and deploying learning models to address complex use cases while leveraging

the computational resources of Google Cloud Platform. Author Ekaba Bisong shows you how machine learning tools and techniques are used to predict or classify events based on a set of interactions between variables known as features or attributes in a particular dataset. He teaches you how deep learning extends the machine learning algorithm of neural networks to learn complex tasks that are difficult for computers to perform, such as recognizing faces and understanding languages. And you will know how to leverage cloud computing to accelerate data science and machine learning deployments. Building Machine Learning and Deep Learning Models on Google Cloud Platform is divided into eight parts that cover the fundamentals of machine learning and deep learning, the concept of data science and cloud services, programming for data science using the Python stack, Google Cloud Platform (GCP) infrastructure and products, advanced analytics on GCP, and deploying end-to-end machine learning solution pipelines on GCP. What You'll Learn Understand the principles and fundamentals of machine learning and deep learning, the algorithms, how to use them, when to use them, and how to interpret your results Know the programming concepts relevant to machine and deep learning design and development using the Python stack Build and interpret machine and deep learning models Use Google Cloud Platform tools and services to develop and deploy large-scale machine learning and deep learning products Be aware of the different facets and design choices to consider when modeling a learning problem Productionalize machine learning models into software products Who This Book Is For Beginners to the practice of data science and applied machine learning, data scientists at all levels, machine learning engineers, Google Cloud Platform data engineers/architects, and software developers

AI as a Service - Peter Elger 2020-09-05

AI as a Service is a practical handbook to building and implementing serverless AI applications, without bogging you down with a lot of theory. Instead, you'll find easy-to-digest instruction and two complete hands-on serverless AI builds in this must-have guide! Summary Companies everywhere are moving everyday business processes over to the cloud, and AI is increasingly being given the reins in these tasks. As this massive digital transformation continues, the combination of serverless computing and AI promises to become the de facto standard for business-to-consumer platform development—and developers who can design, develop, implement, and maintain these systems will be in high demand! AI as a Service is a practical handbook to building and implementing serverless AI applications, without bogging you down with a lot of theory. Instead, you'll find easy-to-digest instruction and two complete hands-on serverless AI builds in this must-have guide! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Cloud-based AI services can automate a variety of labor intensive business tasks in areas such as customer service, data analysis, and financial reporting. The secret is taking

advantage of pre-built tools like Amazon Rekognition for image analysis or AWS Comprehend for natural language processing. That way, there's no need to build expensive custom software. Artificial Intelligence (AI), a machine's ability to learn and make predictions based on patterns it identifies, is already being leveraged by businesses around the world in areas like targeted product recommendations, financial forecasting and resource planning, customer service chatbots, healthcare diagnostics, data security, and more. With the exciting combination of serverless computing and AI, software developers now have enormous power to improve their businesses' existing systems and rapidly deploy new AI-enabled platforms. And to get on this fast-moving train, you don't have to invest loads of time and effort in becoming a data scientist or AI expert, thanks to cloud platforms and the readily available off-the-shelf cloud-based AI services!

About the book *AI as a Service* is a fast-paced guide to harnessing the power of cloud-based solutions. You'll learn to build real-world apps—such as chatbots and text-to-speech services—by stitching together cloud components. Work your way from small projects to large data-intensive applications. What's inside - Apply cloud AI services to existing platforms - Design and build scalable data pipelines - Debug and troubleshoot AI services - Start fast with serverless templates About the reader For software developers familiar with cloud basics. About the author Peter Elger and Eóin Shanaghy are founders and CEO/CTO of fourTheorem, a software solutions company providing expertise on architecture, DevOps, and machine learning. Table of Contents PART 1 - FIRST STEPS 1 A tale of two technologies 2 Building a serverless image recognition system, part 1 3 Building a serverless image recognition system, part 2 PART 2 - TOOLS OF THE TRADE 4 Building and securing a web application the serverless way 5 Adding AI interfaces to a web application 6 How to be effective with AI as a Service 7 Applying AI to existing platforms PART 3 - BRINGING IT ALL TOGETHER 8 Gathering data at scale for real-world AI 9 Extracting value from large data sets with AI

Cloud Native - Boris Scholl 2019-08-21

Developers often struggle when first encountering the cloud. Learning about distributed systems, becoming familiar with technologies such as containers and functions, and knowing how to put everything together can be daunting. With this practical guide, you'll get up to speed on patterns for building cloud native applications and best practices for common tasks such as messaging, eventing, and DevOps. Authors Boris Scholl, Trent Swanson, and Peter Jausovec describe the architectural building blocks for a modern cloud native application. You'll learn how to use microservices, containers, serverless computing, storage types, portability, and functions. You'll also explore the fundamentals of cloud native applications, including how to design, develop, and operate them. Explore the technologies you need to design a cloud native application Distinguish between containers and functions, and learn when to use them Architect applications for data-related requirements Learn DevOps fundamentals

and practices for developing, testing, and operating your applications Use tips, techniques, and best practices for building and managing cloud native applications Understand the costs and trade-offs necessary to make an application portable

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

Building Intelligent Cloud Applications - John Biggs 2019-09-10

Serverless computing is radically changing the way we build and deploy applications. With cloud providers running servers and managing machine resources, companies now can focus solely on the application's business logic and functionality. This hands-on book shows experienced programmers how to build and deploy scalable machine learning and deep learning models using serverless architectures with Microsoft Azure. You'll learn step-by-step how to code machine learning into your projects using Python and pre-trained models that include tools such as image recognition, speech recognition, and classification. You'll also examine issues around deployment and continuous delivery including scaling, security, and monitoring. This book is divided into four parts: Cloud-based development: learn the basics of serverless computing with machine learning, functions as a service (FaaS), and the use of APIs Adding intelligence: create serverless applications using Azure Functions; learn how to use pre-built machine-learning and deep-learning models Deployment and continuous delivery: get up to speed with Azure Kubernetes Service, as well as Azure Security Center, and Azure Monitoring Application examples: deliver data at the edge, build conversational interfaces, and use convolutional neural networks for image classification

Learning Windows Server Containers - Srikanth Machiraju 2017-04-28

Build, package, and deploy applications as easily manageable and shippable containers. About This Book Discover the secret to building

up an Environment for Smart Contracts Development 2. Programming

Smart Contracts Section 4: Blockchain in Real

World

Blockchain-Offerings and Usages

Cloud Design Patterns - Alex Homer 2014-02-17

Cloud applications have a unique set of characteristics. They run on commodity hardware, provide services to untrusted users, and deal with unpredictable workloads. These factors impose a range of problems that you, as a designer or developer, need to resolve. Your applications must be resilient so that they can recover from failures, secure to protect services from malicious attacks, and elastic in order to respond to an ever changing workload. This guide demonstrates design patterns that can help you to solve the problems you might encounter in many different areas of cloud application development. Each pattern discusses design considerations, and explains how you can implement it using the features of Windows Azure. The patterns are grouped into categories: availability, data management, design and implementation, messaging, performance and scalability, resilience, management and monitoring, and security. You will also see more general guidance related to these areas of concern. It explains key concepts such as data consistency and asynchronous messaging. In addition, there is useful guidance and explanation of the key considerations for designing features such as data partitioning, telemetry, and hosting in multiple datacenters. These patterns and guidance can help you to improve the quality of applications and services you create, and make the development process more efficient. Enjoy!

Industrial Internet Application Development - Alena Traukina 2018-09-29

Your one-stop guide to designing, building, managing, and operating Industrial Internet of Things (IIoT) applications Key FeaturesBuild IIoT applications and deploy them on Platform as a Service (PaaS)Learn data analytics techniques in IIoT using Spark and TensorFlowUnderstand and combine Predix services to accelerate your developmentBook Description The Industrial Internet refers to the integration of complex physical machines with networked sensors and software. The current growth in the number of sensors deployed in heavy machinery and industrial equipment will lead to an exponential increase in data being captured that needs to be analyzed for predictive analytics. This also opens up a new avenue for developers who want to build exciting industrial applications. Industrial Internet Application Development serves as a one-stop guide for software professionals wanting to design, build, manage, and operate IIoT applications. You will develop your first IIoT application and understand its deployment and security considerations, followed by running through the deployment of IIoT applications on the Predix platform. Once you have got to grips with what IIoT is, you will move on to exploring Edge Development along with the analytics portions of the IIoT stack. All this will help you identify key elements of the development framework, and understand their

importance when considering the overall architecture and design considerations for IIoT applications. By the end of this book, you will have grasped how to deploy IIoT applications on the Predix platform, as well as incorporate best practices for making fault-tolerant and reliable IIoT systems. What you will learnConnect prototype devices to CloudStore data in IIoT applications Explore data management techniques and implementationStudy IIoT applications analytics using Spark ML and TensorFlow Deploy analytics and visualize the outcomes as AlertsUnderstand continuous deployment using Docker and Cloud FoundryMake your applications fault-tolerant and monitor them with New RelicUnderstand IIoT platform architecture and implement IIoT applications on the platformWho this book is for This book is intended for software developers, architects, product managers, and executives keen to gain insights into Industrial Internet development. A basic knowledge of any popular programming language such as Python will be helpful.

Learning Microsoft Cognitive Services - Leif Larsen 2018-09-27

Build smarter applications with AI capabilities using Microsoft Cognitive Services APIs without much hassle Key FeaturesExplore the Cognitive Services APIs for building machine learning applicationsBuild applications with computer vision, speech recognition, and language processing capabilitiesLearn to implement human-like cognitive intelligence for your applicationsBook Description Microsoft Cognitive Services is a set of APIs for adding intelligence to your application and leverage the power of AI to solve any business problem using the cognitive capabilities. This book will be your practical guide to working with cognitive APIs developed by Microsoft and provided with the Azure platform to developers and businesses. You will learn to integrate the APIs with your applications in Visual Studio. The book introduces you to about 24 APIs including Emotion, Language, Vision, Speech, Knowledge, and Search among others. With the easy-to-follow examples you will be able to develop applications for image processing, speech recognition, text procession, and so on to enhance the capability of your applications to perform more human-like tasks. Going ahead, the book will help you work with the datasets that enable your applications to process various data in form of image, videos, and texts. By the end of the book, you will get confident to explore the Cognitive Services APIs for your applications and make them intelligent for deploying in businesses. What you will learnIdentify a person through visual and audio inspectionReduce user effort by utilizing AI-like capabilitiesUnderstand how to analyze images and texts in different waysAnalyze images using Vision APIsAdd video analysis to applications using Vision APIsUtilize Search to find anything you wantAnalyze text to extract information and explore text structureWho this book is for Learning Microsoft Cognitive Services is for developers and machine learning enthusiasts who want to get started with building intelligent applications without much programming knowledge. Some prior knowledge of .NET and Visual Studio will help you undertake the tasks explained in this book.

[Learn Azure Sentinel](#) - Richard Diver 2020-04-07

Understand how to set up, configure, and use Azure Sentinel to provide security incident and event management services for your environment

Key FeaturesSecure your network, infrastructure, data, and applications on Microsoft Azure effectivelyIntegrate artificial intelligence, threat analysis, and automation for optimal security solutionsInvestigate possible security breaches and gather forensic evidence to prevent modern cyber threats

Book Description Azure Sentinel is a Security Information and Event Management (SIEM) tool developed by Microsoft to integrate cloud security and artificial intelligence (AI). Azure Sentinel not only helps clients identify security issues in their environment, but also uses automation to help resolve these issues. With this book, you'll implement Azure Sentinel and understand how it can help find security incidents in your environment with integrated artificial intelligence, threat analysis, and built-in and community-driven logic. This book starts with an introduction to Azure Sentinel and Log Analytics. You'll get to grips with data collection and management, before learning how to create effective Azure Sentinel queries to detect anomalous behaviors and patterns of activity. As you make progress, you'll understand how to develop solutions that automate the responses required to handle security incidents. Finally, you'll grasp the latest developments in security, discover techniques to enhance your cloud security architecture, and explore how you can contribute to the security community. By the end of this book, you'll have learned how to implement Azure Sentinel to fit your needs and be able to protect your environment from cyber threats and other security issues. What you will learn

Understand how to design and build a security operations centerDiscover the key components of a cloud security architectureManage and investigate Azure Sentinel incidentsUse playbooks to automate incident responsesUnderstand how to set up Azure Monitor Log Analytics and Azure SentinelIngest data into Azure Sentinel from the cloud and on-premises devicesPerform threat hunting in Azure Sentinel

Who this book is for This book is for solution architects and system administrators who are responsible for implementing new solutions in their infrastructure. Security analysts who need to monitor and provide immediate security solutions or threat hunters looking to learn how to use Azure Sentinel to investigate possible security breaches and gather forensic evidence will also benefit from this book. Prior experience with cloud security, particularly Azure, is necessary.

[Developing Cloud Native Applications in Azure using .NET Core](#) - Kodali Rekha 2020-02-01

Guide to designing and developing cloud native applications in Azure

Key Featuresa- Basics of Cloud Native Applications a- Designing Microservicesa- Different cloud native options for developing Cloud Native Applications in Azurea- BOTs, Web Apps, Mobile Apps, Logic Apps, Service Bus, Azure Functionsa- Azure IOT Applicationsa- Azure Machine Learning Basicsa- Enterprise Digital Journeys

DescriptionThe

mainstreaming of the cloud-native architecture as an enterprise discipline is well underway. According to the Forbes report, in January 2018, 83% of enterprise workloads will be in the cloud by 2020, 41% of enterprise workloads will run on public cloud platforms while another 22% will be running on hybrid cloud platforms. Customers are embarking on enterprise digital transformation journeys. Adopting cloud, cloud-native architectures, and microservices is an important aspect of the journey. This book starts with a brief introduction to the basics of cloud-native applications and cloud-native application patterns. It covers cloud-native options available in Azure. The objective of the book is to provide practical guidelines to an architect/designer/consultant/developer who is part of the Cloud application definition team. The book articulates a methodology that the implementation team needs to follow in a systematic manner and adapt them to fulfill the requirements for enabling the cloud-native application. It emphasizes on the interpersonal skills and techniques for organizing and directing the cloud-native definition, leadership buy-in, and leading the transition from planning to implementation. It also highlights steps to be followed and the patterns for developing cloud-native applications, cloud-native options available in Azure, developing BOT, and microservices based on Azure. It also covers how to develop simple IoT applications, Machine learning-based applications, and the serverless architecture using Azure with a practical and pragmatic approach. This book embraces a structured approach around the following key themes that represent the typical phases an enterprise traverses during its cloud-native application journey. What will you learn This book aims to:

- a- Demonstrate the importance of cloud-native applications in elevating the effectiveness of organizational transformation programs and digital enterprise journeys using MS Azure.
- a- Disseminate current advancements and thought leadership in the area of cloud-native architecture in the context of digital enterprises.
- a- Provide initiatives with evidence-based, credible, field-tested and practical guidance in designing their respective architectures.

Who this book is for The book is intended for anyone looking for a career in Cloud technology, especially all aspiring Cloud Architects who want to learn cloud-native architectures, Microservices, IoT, BOT and Microsoft Azure platform.

Table of Contents

1. Basics of Cloud Native Applications
2. Cloud Native Application Patterns
3. Cloud Native Options available in Azure - BOTs, Logic Apps, Service Bus, Azure Microservices, ML services
4. Developing a Simple BOT using .NET Core
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6. Developing Integration capabilities using serverless architecture
7. Developing a simple IoT application
8. Developing a simple ML based application
9. Different enterprise use cases which enable digital transformation using Cloud Native Applications

Developing Cloud Native Applications in Azure using .NET Core - Rekha Kodali 2020-02-01

Guide to designing and developing cloud native applications in Azure

DESCRIPTION The mainstreaming of Cloud Native Architecture as an enterprise discipline is well underway. According to the Forbes report in January 2018, 83% of the enterprise workloads will be in the cloud by 2020 and 41% of the enterprise workloads will run on public cloud platforms, while another 22% will be running on hybrid cloud platforms. Customers are embarking on the enterprise digital transformation journeys. Adopting cloud and cloud native architectures and microservices is an important aspect of the journey. This book starts with a brief introduction on the basics of cloud native applications, cloud native application patterns. Then it covers the cloud native options available in Azure. The objective of the book is to provide practical guidelines to an architect/designer/consultant/developer, who is a part of the Cloud application definition Team. The book articulates a methodology that the implementation team needs to follow in a step-by-step manner and adopt them to fulfil the requirements for enablement of the Cloud Native application. It emphasizes on the interpersonal skills and techniques for organizing and directing the Cloud Native definition, leadership buy-in, leading the transition from planning to implementation. It also highlights the steps to be followed for performing the cloud native applications, cloud native patterns in the development of Cloud native applications, Cloud native options available in Azure, Developing BOT, Microservices based on Azure. It also covers how to develop simple IoT applications, Machine learning based applications, server less architecture, using Azure with a practical and pragmatic approach. This book embraces a structured approach organized around the following key themes, which represent the typical phases that an enterprise traverses during its Cloud Native application journey:

- Basics of Cloud Native Applications: It covers basics of cloud native applications using .NET core.
- Cloud Native Application Patterns: The reader will understand the patterns for developing Cloud Native Applications.
- Cloud Native Options available in Azure: The reader will understand the different options available in Azure.
- Developing a Simple BOT using .NET Core: The reader will understand the Azure BOT framework basics and will learn how to develop a simple BOT.
- Developing cloud native applications leveraging Microservices: The reader will understand the concepts of developing micro services using the Azure API Gateway Manager.
- Developing Integration capabilities using serverless architecture: The reader will understand the integration capabilities and various options available in Azure
- Developing a simple IoT application: The reader will understand the basics of developing IoT applications.
- Developing a simple ML based application: The reader will understand Machine Learning basics and how to develop a simple ML application
- Different enterprise use cases, which enable digital transformation using the Cloud Native Applications: The reader will learn about different use cases that can be built using cloud native applications

KEY FEATURES (Add 5-7 key features only)

- Basics of Cloud Native Applications
- Designing Microservices
- Different cloud

native options for developing Cloud Native Applications in Azure

- BOTs, Web Apps, Mobile Apps, Logic Apps, Service Bus, Azure Functions
- Azure IOT Applications
- Azure Machine Learning Basics
- Enterprise Digital Journeys

WHAT WILL YOU LEARN This book aims to:

- Demonstrate the importance of a Cloud Native application in elevating the effectiveness of organizational transformation programs and digital enterprise journeys, using MS Azure
- Disseminate current advancements and thought leadership in the area of Cloud Native architecture, in the context of digital enterprises
- Provide initiatives with evidence-based, credible, field tested and practical guidance in crafting their respective architectures; and
- Showcase examples and experiences of the innovative use of Cloud Native Applications in enhancing transformation initiatives.

WHO THIS BOOK IS FOR The book is intended for anyone looking for a career in Cloud technology, all aspiring Cloud Architects who want to learn Cloud Native Architectures, Microservices, IoT, BoT and Microsoft Azure platform and working professionals who want to switch their career in Cloud Technology. While no prior knowledge of Azure or related technologies is assumed, it will be helpful to have some .Net programming experience. In addition, the target audience of this book are,

- Business Leaders, Chief Architects, Analysts and Designers seeking better, quicker and easier approaches to respond to needs of their internal and external customers;
- CIOs/CTOs of business software companies interested in incorporating Cloud Native architecture to differentiate their products and services offerings and increasing the value proposition to their customers;
- Consultants and practitioners desirous of new solutions and technologies to improve productivity of their clients;
- Academic and consulting researchers looking to uncover and characterize new research problems and programmes
- Practitioners and professionals involved with organizational technology strategic planning, technology procurement, management of technology projects, consulting and advising on technology issues and management of total cost of ownership.

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Design Patterns and Best Practices in Java - Kamalmeet Singh

2018-06-27

Create various design patterns to master the art of solving problems using Java Key Features This book demonstrates the shift from OOP to functional programming and covers reactive and functional patterns in a clear and step-by-step manner All the design patterns come with a

practical use case as part of the explanation, which will improve your productivity Tackle all kinds of performance-related issues and streamline your development Book Description Having a knowledge of design patterns enables you, as a developer, to improve your code base, promote code reuse, and make the architecture more robust. As languages evolve, new features take time to fully understand before they are adopted en masse. The mission of this book is to ease the adoption of the latest trends and provide good practices for programmers. We focus on showing you the practical aspects of smarter coding in Java. We'll start off by going over object-oriented (OOP) and functional programming (FP) paradigms, moving on to describe the most frequently used design patterns in their classical format and explain how Java's functional programming features are changing them. You will learn to enhance implementations by mixing OOP and FP, and finally get to know about the reactive programming model, where FP and OOP are used in conjunction with a view to writing better code. Gradually, the book will show you the latest trends in architecture, moving from MVC to microservices and serverless architecture. We will finish off by highlighting the new Java features and best practices. By the end of the book, you will be able to efficiently address common problems faced while developing applications and be comfortable working on scalable and maintainable projects of any size. What you will learn Understand the OOP and FP paradigms Explore the traditional Java design patterns Get to know the new functional features of Java See how design patterns are changed and affected by the new features Discover what reactive programming is and why is it the natural augmentation of FP Work with reactive design patterns and find the best ways to solve common problems using them See the latest trends in architecture and the shift from MVC to serverless applications Use best practices when working with the new features Who this book is for This book is for those who are familiar with Java development and want to be in the driver's seat when it comes to modern development techniques. Basic OOP Java programming experience and elementary familiarity with Java is expected.

Management, Information and Educational Engineering - Hsiang-Chuan Liu
2015-06-11

This book contains selected Computer, Management, Information and Educational Engineering related papers from the 2014 International Conference on Management, Information and Educational Engineering (MIEE 2014) which was held in Xiamen, China on November 22-23, 2014. The conference aimed to provide a platform for researchers, engineers and academic

Practical Azure Application Development - Thurupathan Vijayakumar
2017-05-25

Get started and learn a step-by-step approach to application development using Microsoft Azure. Select the right services to solve the problem at hand in a cost-effective manner and explore the potential different services

and how they can help in building enterprise applications. Azure has an ample amount of resources and tutorials, but most of them focus on specific services and explain those services on their own and in a given context. Practical Azure Application Development focuses on building complete solutions on Azure using different services. This book gives you the holistic approach to Azure as a solutions development platform. This book: Covers Azure as a solution development platform for building applications Provides real-world examples to understand why and when an Azure service is required Discusses how Azure helps to achieve continuous improvement and expansion of an application Provides application development experience from purchasing Azure to integrating with core Azure services, including an introduction to DevOps with VSTS What You'll Learn Use Azure services to solve real-world software problems Define the usage of Azure services and select the right services to solve the problem at hand Make clear and less ambiguous decisions about using different Azure services Take a holistic approach to Azure as a solution platform Understand the basics of security, data protection, and cost controls in Azure Who This Book Is For Developers, software engineers, and architects who have experience in .NET and web development, but have little or no knowledge in planning and developing an application on Azure

Serverless Integration Design Patterns with Azure - Abhishek Kumar
2019-02-13

A practical guide that helps you progress to using modern integration methods and leverage new cloud capability models Key Features Design critical hybrid integration solutions for your organization Gain in-depth knowledge of how to build cloud-native integration solutions Leverage cognitive services to build smart cloud solutions Book Description With more enterprises adapting cloud-based and API-based solutions, application integration has become more relevant and significant than ever before. Parallely, Serverless Integration has gained popularity, as it helps agile organizations to build integration solutions quickly without having to worry about infrastructure costs. With Microsoft Azure's serverless offerings, such as Logic Apps, Azure Functions, API Management, Azure Event Grid and Service Bus, organizations can build powerful, secure, and scalable integration solutions with ease. The primary objective of this book is to help you to understand various serverless offerings included within Azure Integration Services, taking you through the basics and industry practices and patterns. This book starts by explaining the concepts of services such as Azure Functions, Logic Apps, and Service Bus with hands-on examples and use cases. After getting to grips with the basics, you will be introduced to API Management and building B2B solutions using Logic Apps Enterprise Integration Pack. This book will help readers to understand building hybrid integration solutions and touches upon Microsoft Cognitive Services and leveraging them in modern integration solutions. Industry practices and patterns are brought to light at

appropriate opportunities while explaining various concepts. What you will learn
Learn about the design principles of Microsoft Azure Serverless Integration
Get insights into Azure Functions, Logic Apps, Azure Event Grid and Service Bus
Secure and manage your integration endpoints using Azure API Management
Build advanced B2B solutions using Logic Apps, Enterprise Integration Pack
Monitor integration solutions using tools

available on the market
Discover design patterns for hybrid integration
Who this book is for
Serverless Integration Design Patterns with Azure is for you if you are a solution architect or integration professional aiming to build complex cloud solutions for your organization. Developers looking to build next-level hybrid or cloud solutions will also find this book useful. Prior programming knowledge is necessary.