On the Move to Meaningful Internet Systems. OTM 2017 Conferences

This book highlights new trends and challenges in intelligent systems, which play an important part in the digital transformation of many areas of science and practice. It includes papers offering a deeper understanding of the human-centred perspective on artificial intelligence, of intelligent value co-creation, ethics, value-oriented digital models, transparency, and intelligent digital architectures and engineering to support digital services and intelligent systems, the transformation of structures in digital businesses and intelligent systems based on human practices, as well as the study of interaction and the co-adaptation of humans and systems. All papers were originally presented at the International KES Conference on Human Centred Intelligent Systems 2020 (KES HCIS 2020), held on June 17–19, 2020, in Split, Croatia.

Innovation in Medicine and Healthcare Systems, and Multimedia

This book contains revised selected and invited papers presented at the International Workshop on Massively Multi-Agent Systems, MMAS 2018, held in Stockholm, Sweden, in July 2018. The 7 revised full papers presented were carefully reviewed and selected for inclusion in this volume. Also included are 3 post-workshop papers. The papers discuss enabling technologies, new architectures, promising applications, and challenges of massively multi-agent systems in the era of IoT. They are organized in the following topical sections: multi-agent systems and Internet of Things; architectures for massively multi-agent systems; and applications of massively multi-agent systems.
Developing Cloud Native Applications in Azure using .NET Core

This double volumes LNCS 10573-10574 constitutes the refereed proceedings of the Confederated International Conferences: Cooperative Information Systems, CoopIS 2017, Ontologies, Databases, and Applications of Semantics, ODBASE 2017, and Cloud and Trusted Computing, C&TC, held as part of OTM 2017 in October 2017 in Rhodes, Greece. The 61 full papers presented together with 19 short papers were carefully reviewed and selected from 180 submissions. The OTM program every year covers data and Web semantics, distributed objects, Web services, databases, information systems, enterprise workflow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

IoT, AI, and Blockchain for .NET

Quickly and productively develop complex Spring applications and microservices out of the box, with minimal concern over things like configurations. This revised book will show you how to fully leverage the Spring Boot 2 technology and how to apply it to create enterprise ready applications that just work. It will also cover what’s been added to the new Spring Boot 2 release, including Spring Framework 5 features like WebFlux, Security, Actuator and the new way to expose Metrics through Micrometer framework, and more. This book is your authoritative hands-on practical guide for increasing your enterprise Java and cloud application productivity while decreasing development time. It's a no nonsense guide with case studies of increasing complexity throughout the book. The author, a senior solutions architect and Principal Technical instructor with Pivotal, the company behind the Spring Framework, shares his experience, insights and first-hand knowledge about how Spring Boot technology works and best practices. Pro Spring Boot 2 is an essential book for your Spring learning and reference library. What You Will Learn Configure and use Spring Boot Use non-functional requirements with Spring Boot Actuator Carry out web development with Spring Boot Persistence with JDBC, JPA and NoSQL Databases Messaging with JMS, RabbitMQ and WebSockets Test and deploy with Spring Boot A quick look at the Spring Cloud projects Microservices and deployment to the Cloud Extend Spring Boot by creating your own Spring Boot Starter and @Enable feature Who This Book Is For Experienced Spring and Java developers seeking increased productivity gains and decreased complexity and development time in their applications and software services.

Massively Multi-Agent Systems II

Transition to Microservices and DevOps to Transform Your Software Development Effectiveness

Thanks to the tech sector’s latest game-changing innovations—the Internet of Things (IoT), software-enabled networking, and software as a service (SaaS), to name a few—there is now a seemingly insatiable demand for platforms and architectures that can improve the process of application development and deployment. In Microservices and Containers, longtime systems architect and engineering team leader Parminder Kocher analyzes two of the hottest new technology trends: microservices and containers. Together, as Kocher demonstrates, microservices and Docker containers can bring unprecedented agility and scalability to application development and deployment, especially in large, complex projects where speed is crucial but small errors can be disastrous. Learn how to leverage microservices and Docker to drive modular architectural design, on-demand scalability, application performance and reliability, time-to-market, code reuse, and exponential improvements in DevOps effectiveness. Kocher offers detailed guidance and a complete roadmap for transitioning from monolithic architectures, as well as an in-depth case study that walks the reader through the migration of an enterprise-class SOA system.
Understand how microservices enable you to organize applications into standalone components that are easier to manage, update, and scale. Decide whether microservices and containers are worth your investment, and manage the organizational learning curve associated with them. Apply best practices for interprocess communication among microservices. Migrate monolithic systems in an orderly fashion. Understand Docker containers, installation, and interfaces. Network, orchestrate, and manage Docker containers effectively. Use Docker to maximize scalability in microservices-based applications. Apply your learning with an in-depth, hands-on case study. Whether you are a software architect/developer or systems professional looking to move on from older approaches or a manager trying to maximize the business value of these technologies, Microservices and Containers will be an invaluable addition to your library. Register your product at informit.com/register for convenient access to downloads, updates, and/or corrections as they become available.

The Azure Cloud Native Architecture Mapbook

Learn how today’s businesses can transform themselves by leveraging real-time data and advanced machine learning analytics. This book provides prescriptive guidance for architects and developers on the design and development of modern Internet of Things (IoT) and Advanced Analytics solutions. In addition, Business in Real-Time Using Azure IoT and Cortana Intelligence Suite offers patterns and practices for those looking to engage their customers and partners through Software-as-a-Service solutions that work on any device. Whether you’re working in Health & Life Sciences, Manufacturing, Retail, Smart Cities and Buildings or Process Control, there exists a common platform from which you can create your targeted vertical solutions. Business in Real-Time Using Azure IoT and Cortana Intelligence Suite uses a reference architecture as a road map. Building on Azure’s PaaS services, you’ll see how a solution architecture unfolds that demonstrates a complete end-to-end IoT and Advanced Analytics scenario. What You’ll Learn: Automate your software product life cycle using PowerShell, Azure Resource Manager Templates, and Visual Studio Team Services. Implement smart devices using Node.JS and C#. Use Azure Streaming Analytics to ingest millions of events. Provide both “Hot” and “Cold” path outputs for real-time alerts, data transformations, and aggregation analytics. Implement batch processing using Azure Data Factory. Create a new form of Actionable Intelligence (AI) to drive mission critical business processes. Provide rich Data Visualizations across a wide variety of mobile and web devices. Who This Book is For: Solution Architects, Software Developers, Data Architects, Data Scientists, and CIO/CTO Technical Leadership Professionals.

Microservices and Containers

Architect enterprise-grade, Microservice-based solutions using Microsoft Azure Service Fabric. About This Book Explore architectural patterns for building modern day Microservice-based systems. Learn about Microsoft Service Fabric as a platform to host distributed Microservices. Discover multiple options for hosting Microservices on heterogeneous, cross-platform environments. Learn to configure Azure Service Fabric clusters for enterprise-grade service deployments. Who This Book Is For The book is aimed at IT architects, system administrators, and DevOps engineers who have a basic knowledge of the Microsoft Azure platform and are working on, or are curious about, the concepts of Microservices and Microservice architecture. What You Will Learn Understand the basics of Microservices and how Microsoft Azure fits into the equation. Master Azure Service Fabric architecture and services. Explore Azure Service Fabric application programming models. Comprehensive study of various architecture patterns for building enterprise-grade Microservices. Manage and deploy Microservices on Azure Service Fabric.
Fabric An insight into the future of Microservices with containers and serverless computing In Detail Microsoft Azure is rapidly evolving and is widely used as a platform on which you can build Microservices that can be deployed on-premise and on-cloud heterogeneous environments through Microsoft Azure Service Fabric. This book will help you understand the concepts of Microservice application architecture and build highly maintainable and scalable enterprise-grade applications using the various services in Microsoft Azure Service Fabric. We will begin by understanding the intricacies of the Microservices architecture and its advantages over the monolithic architecture and Service Oriented Architecture (SOA) principles. We will present various scenarios where Microservices should be used and walk you through the architectures of Microservice-based applications. Next, you will take an in-depth look at Microsoft Azure Service Fabric, which is the best-in-class platform for building Microservices. You will explore how to develop and deploy sample applications on Microsoft Azure Service Fabric to gain a thorough understanding of it. Building Microservice-based application is complicated. Therefore, we will take you through several design patterns that solve the various challenges associated with realizing the Microservices architecture in enterprise applications. Each pattern will be clearly illustrated with examples that you can keep referring to when designing applications. Finally, you will be introduced to advanced topics such as Serverless computing and DevOps using Service Fabric, to help you undertake your next venture with confidence. Style and approach This book introduces its readers to the concept of Microservices and Microsoft Azure Service Fabric as a distributed platform to host enterprise-grade Microservices. It then addresses common architectural challenges associated with the Microservice architecture, using proven architectural patterns.

Robust Cloud Integration with Azure

Unleash the power of serverless integration with Azure About This Book Build and support highly available and scalable API Apps by learning powerful Azure-based cloud integration Deploy and deliver applications that integrate seamlessly in the cloud and quickly adapt as per your integration needs Deploy hybrid applications that work and integrate on the cloud (using Logic Apps and BizTalk Server) Who This Book Is For This book is for Microsoft Enterprise developers, DevOps, and IT professionals who would like to use Azure App Service and Microsoft Cloud Integration technologies to create cloud-based web and mobile apps. What You Will Learn Explore new models of robust cloud integration in Microsoft Azure Create your own connector and learn how to publish and manage it Build reliable, scalable, and secure business workflows using Azure Logic Apps Simplify SaaS connectivity with Azure using Logic Apps Connect your on-premises system to Azure securely Get to know more about Logic Apps and how to connect to on-premises “line-of-business” applications using Microsoft BizTalk Server In Detail Microsoft is focusing heavily on Enterprise connectivity so that developers can build scalable web and mobile apps and services in the cloud. In short, Enterprise connectivity from anywhere and to any device. These integration services are being offered through powerful Azure-based services. This book will teach you how to design and implement cloud integration using Microsoft Azure. It starts by showing you how to build, deploy, and secure the API app. Next, it introduces you to Logic Apps and helps you quickly start building your integration applications. We'll then go through the different connectors available for Logic Apps to build your automated business process workflow. Further on, you will see how to create a complex workflow in Logic Apps using Azure Function. You will then add a SaaS application to your existing cloud applications and create Queues and Topics in Service Bus on Azure using Azure Portal. Towards the end, we’ll explore event hubs and IoT hubs, and you’ll get to know more about how to tool and monitor the business workflow in Logic Apps. Using this book, you will be able to support your apps that connect to data anywhere—be it in the cloud or on-premises. Style and approach This practical hands-on tutorial shows you the full capability of App Service and other Azure-based integration services to build
scalable and highly available web and mobile apps. It helps you successfully build and support your applications in the cloud or on-premises successfully. We'll debunk the popular myth that switching to cloud is risky—it's not!

**Microservices with Docker on Microsoft Azure (includes Content Update Program)**

Collect and analyze sensor and usage data from Internet of Things applications with Microsoft Azure IoT Suite. Internet connectivity to everyday devices such as light bulbs, thermostats, and even voice-command devices such as Google Home and Amazon.com's Alexa is exploding. These connected devices and their respective applications generate large amounts of data that can be mined to enhance user-friendliness and make predictions about what a user might be likely to do next. Microsoft's Azure IoT Suite is a cloud-based platform that is ideal for collecting data from connected devices. You'll learn in this book about data acquisition and analysis, including real-time analysis. Real-world examples are provided to teach you to detect anomalous patterns in your data that might lead to business advantage. We live in a time when the amount of data being generated and stored is growing at an exponential rate. Understanding and getting real-time insight into these data is critical to business. IoT Solutions in Microsoft's Azure IoT Suite walks you through a complete, end-to-end journey of how to collect and store data from Internet-connected devices. You'll learn to analyze the data and to apply your results to solving real-world problems. Your customers will benefit from the increasingly capable and reliable applications that you'll be able to deploy to them. You and your business will benefit from the gains in insight and knowledge that can be applied to delight your customers and increase the value from their business. What You'll Learn Go through data generation, collection, and storage from sensors and devices, both relational and non-relational Understand, from end to end, Microsoft's analytic services and where they fit into the analytical ecosystem Look at the Internet of your things and find ways to discover and draw on the insights your data can provide Understand Microsoft's IoT technologies and services, and stitch them together for business insight and advantage Who This Book Is For Developers and architects who plan on delivering IoT solutions, data scientists who want to understand how to get better insights into their data, and anyone needing or wanting to do real-time analysis of data from the Internet of Things

**An An Atypical ASP.NET Core 5 Design Patterns Guide**

Start using Kubernetes in complex big data and enterprise applications, including Docker containers. Starting with installing Kubernetes on a single node, the book introduces Kubernetes with a simple Hello example and discusses using environment variables in Kubernetes. Next, Kubernetes Microservices with Docker discusses using Kubernetes with all major groups of technologies such as relational databases, NoSQL databases, and in the Apache Hadoop ecosystem. The book concludes with using multi container pods and installing Kubernetes on a multi node cluster. "a concise but clear introduction to containers, Docker and Kubernetes, using simple real-world examples to pass on the core concepts, via repetition, and is a very useful enabler.’’ 10/10 Dave Hay MBCS CITP: review for BCS, The Chartered Institute for IT (http://www.bcs.org/content/conWebDoc/58512) What You Will Learn Install Kubernetes on a single node Set environment variables Create multi-container pods using Docker Use volumes Use Kubernetes with the Apache Hadoop ecosystem, NoSQL databases, and RDBMSs Install Kubernetes on a multi-node cluster Who This Book Is For Application developers including Apache Hadoop developers, database developers and NoSQL developers.

**Cloud Computing for Science and Engineering**
Microsoft Azure Essentials from Microsoft Press is a series of free ebooks designed to help you advance your technical skills with Microsoft Azure. The first ebook in the series, Microsoft Azure Essentials: Fundamentals of Azure, introduces developers and IT professionals to the wide range of capabilities in Azure. The authors - both Microsoft MVPs in Azure - present both conceptual and how-to content for key areas, including: Azure Websites and Azure Cloud Services Azure Virtual Machines Azure Storage Azure Virtual Networks Databases Azure Active Directory Management tools Business scenarios Watch Microsoft Press’s blog and Twitter (@MicrosoftPress) to learn about other free ebooks in the “Microsoft Azure Essentials” series.

Service-Oriented Architecture

This book provides practical guidance for adopting a high velocity, continuous delivery process to create reliable, scalable, Software-as-a-Service (SaaS) solutions that are designed and built using a microservice architecture, deployed to the Azure cloud, and managed through automation. Microservices, IoT, and Azure offers software developers, architects, and operations engineers’ step-by-step directions for building SaaS applications—applications that are available 24x7, work on any device, scale elastically, and are resilient to change—through code, script, exercises, and a working reference implementation. The book provides a working definition of microservices and contrasts this approach with traditional monolithic Layered Architecture. A fictitious, homebiomedical startup is used to demonstrate microservice architecture and automation capabilities for cross-cutting and business services as well as connected device scenarios for Internet of Things (IoT). Several Azure PaaS services are detailed including Storage, SQL Database, DocumentDb, Redis Cache, Cloud Services, Web API's, API Management, IoT Hub, IoT Suite, Event Hub, and Stream Analytics. Finally the book looks to the future and examines Service Fabric to see how microservices are becoming the de facto approach to building reliable software in the cloud. In this book, you’ll learn: What microservices are and why are they’re a compelling architecture pattern for SaaS applications How to design, develop, and deploy microservices using Visual Studio, PowerShell, and Azure Microservice patterns for cross-cutting concerns and business capabilities Microservice patterns for Internet of Things and big data analytics solutions using IoT Hub, Event Hub, and Stream Analytics Techniques for automating microservice provisioning, building, and deployment What Service Fabric is and how it's the future direction for microservices on Microsoft Azure

Business in Real-Time Using Azure IoT and Cortana Intelligence Suite

Implement microservices starting with their architecture and moving on to their deployment, manageability, security, and monitoring. This book focuses on the key scenarios where microservices architecture is preferred over a monolithic architecture. Building Microservices Applications on Microsoft Azure begins with a survey of microservices architecture compared to monolithic architecture and covers microservices implementation in detail. You'll see the key scenarios where microservices architecture is preferred over a monolithic approach. From there, you will explore the critical components and various deployment options of microservices on platforms such as Microsoft Azure (public cloud) and Azure Stack (hybrid cloud). This includes in-depth coverage of developing, deploying, and monitoring microservices on containers and orchestrating with Azure Service Fabric and Azure Kubernetes Cluster (AKS). This book includes practical experience from large-scale enterprise deployments, therefore it can be a quick reference for solution architects and developers to understand the critical factors while designing a microservices application. What You Will Learn Explore the use cases of microservices and monolithic architecture Discover the architecture patterns to build scalable, agile, and secure microservices applications Develop and deploy microservices using Azure Service Fabric and
Azure Kubernetes Service Secure microservices using the gateway pattern See the deployment options for Microservices on Azure Stack Implement database patterns to handle the complexities introduced by microservices Who This Book Is For Architects and consultants who work on Microsoft Azure and manage large-scale deployments.

Microservices, IoT and Azure

Cloud computing has experienced explosive growth and is expected to continue to rise in popularity as new services and applications become available. As with any new technology, security issues continue to be a concern, and developing effective methods to protect sensitive information and data on the cloud is imperative. Cloud Security: Concepts, Methodologies, Tools, and Applications explores the difficulties and challenges of securing user data and information on cloud platforms. It also examines the current approaches to cloud-based technologies and assesses the possibilities for future advancements in this field. Highlighting a range of topics such as cloud forensics, information privacy, and standardization and security in the cloud, this multi-volume book is ideally designed for IT specialists, web designers, computer engineers, software developers, academicians, researchers, and graduate-level students interested in cloud computing concepts and security.

Microsoft Azure Essentials - Fundamentals of Azure

This book discusses business architecture as a basis for aligning efforts with outcomes. It views BA as complementary to enterprise architecture, where the focus of technological initiatives and inventories is to understand and improve business organization, business direction, and business decision-making. This book provides a practical, long-term view on BA. Based on the authors' consulting experience and industrial research, the material in this book is a valuable addition to the thought processes around BA and EA. The lead author has direct and practical experience with large clients in applying APQC capability framework for undertaking multiple enterprise-wide capability assessments.

Human Centred Intelligent Systems

Ben is stuck. A development lead with a strong vision for how the intersection of development and operations at his office can be improved, he can’t help but feel overwhelmed and discouraged by common problems such as slow turnaround time, rushed and ineffective handover documentation, mounting technical debt, and a lagging QA process. What steps should Ben take to build the momentum needed to create positive changes within his company? In this unique business novel by Dave Harrison and Knox Lively, two DevOps professionals with years of diverse experience in the industry, you follow Ben as he solves work frustrations in order to adopt Agile, DevOps, and microservices architectures for his organization. Achieving DevOps addresses the “Now what?” moment many DevOps professionals face on their journey. The story provides you with the knowledge you need to navigate the internal political waters, build management support, show measurable results, and bring DevOps successfully into your organization. Come away with practical lessons and timeless business concepts. You’ll know how to effect change in a company from the bottom up, gain support, and instill a pattern of progressively building on success. Experience Ben’s progress vicariously in Achieving DevOps and bridge the gap between inspiration and the implementation of your own DevOps practices. Who This Book Is For Those serving as change agents who are working to influence and move their organizations toward a DevOps approach to software development and deployment: those working to effect change from
the bottom up such as development leads, QA leads, project managers, and individual developers; and IT directors, CTOs, and others at the top of an organization who are being asked to lend their support toward DevOps implementation efforts.

Innovation in Medicine and Healthcare

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer—even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?"; Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

Smart Sensors Networks

A guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The emergence of powerful, always-on cloud utilities has transformed how consumers interact with information technology, enabling video streaming, intelligent personal assistants, and the sharing of content. Businesses, too, have benefited from the cloud, outsourcing much of their information technology to cloud services. Science, however, has not fully exploited the advantages of the cloud. Could scientific discovery be accelerated if mundane chores were automated and outsourced to the cloud? Leading computer scientists Ian Foster and Dennis Gannon argue that it can, and in this book offer a guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The book surveys the technology that underpins the cloud, new approaches to technical problems enabled by the cloud, and the concepts required to integrate cloud services into scientific work. It covers managing data in the cloud, and how to program these services; computing in the cloud, from deploying single virtual machines or containers to supporting basic interactive science experiments to gathering clusters of machines to do data analytics; using the cloud as a platform for automating analysis procedures, machine learning, and analyzing streaming data; building your own cloud with open source software; and cloud security. The book is accompanied by a website, Cloud4SciEng.org, that provides a variety of supplementary material, including exercises, lecture slides, and other resources helpful to readers and instructors.

Developing Cloud Native Applications in Azure using .NET Core

The highly dynamic world of information technology service management stresses the benefits of the quick and correct implementation of IT services. A disciplined approach relies on a separate set of assumptions and principles as an agile approach, both of which have complicated
implementation processes as well as copious benefits. Combining these two approaches to enhance the effectiveness of each, while difficult, can yield exceptional dividends. Balancing Agile and Disciplined Engineering and Management Approaches for IT Services and Software Products is an essential publication that focuses on clarifying theoretical foundations of balanced design methods with conceptual frameworks and empirical cases. Highlighting a broad range of topics including business trends, IT service, and software development, this book is ideally designed for software engineers, software developers, programmers, information technology professionals, researchers, academicians, and students.

Building Microservices Applications on Microsoft Azure

Why a book about logs? That’s easy: the humble log is an abstraction that lies at the heart of many systems, from NoSQL databases to cryptocurrencies. Even though most engineers don’t think much about them, this short book shows you why logs are worthy of your attention. Based on his popular blog posts, LinkedIn principal engineer Jay Kreps shows you how logs work in distributed systems, and then delivers practical applications of these concepts in a variety of common uses—data integration, enterprise architecture, real-time stream processing, data system design, and abstract computing models. Go ahead and take the plunge with logs; you’re going love them. Learn how logs are used for programmatic access in databases and distributed systems Discover solutions to the huge data integration problem when more data of more varieties meet more systems Understand why logs are at the heart of real-time stream processing Learn the role of a log in the internals of online data systems Explore how Jay Kreps applies these ideas to his own work on data infrastructure systems at LinkedIn

Kubernetes Microservices with Docker

This volume is a collection of papers on emerging concepts, approaches and ideas in information systems research. It examines theoretical and methodological issues related to both information systems development in general and the complexity of information systems as socio-technical systems. The book draws on invited papers selected from the proceedings of the 25th International Conference on Information Systems Development (ISD) held in Katowice, Poland, August 24 - 26, 2016. The invited conference papers were revised and expanded and present research that is focused on context, creativity, and cognition in information systems development. These issues are significant as they provide the basis for organizations to identify new markets, support innovative technology deployment, and enable mobile applications to detect, sense, interpret, and respond to the environment.

Cloud Security: Concepts, Methodologies, Tools, and Applications

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 Basics Enterprise Digital JourneysDescriptionThe 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:
- Demonstrate the importance of cloud-native applications 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 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
5. Developing Cloud Native applications leveraging Microservices and Azure API Gateway
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

Exam Ref 70-535 Architecting Microsoft Azure Solutions

Guide to designing and developing cloud native applications in Azure Key Features
- 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

Description
The 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,
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Pro Spring Boot 2

This book investigates solutions incorporated by architecture boards in global enterprises to resolve issues and mitigate related architecture risks, while also proposing and implementing an adaptive integrated digital architecture framework (AIDAF) and related models and approaches/platforms, which can be applied in companies to promote IT strategies using cloud/mobile IT/digital IT. The book is divided into three main parts, the first of which (Chapters 1–2) addresses the background and motivation for AIDAF aligned with digital IT strategies. The second part (Chapter 3) provides an overview of strategic enterprise architecture (EA) frameworks for digital IT, elaborates on the essential elements of EA frameworks in the digital IT era, and advocates using AIDAF, models for architecture assessment/risk management, knowledge management on digital platforms. In turn, the third part (Chapters 4–7) demonstrates the application and benefits of AIDAF and related models, as shown in three case studies. “I found this book to be a very nice contribution to the EA community of practice. I can recommend this book as a textbook for digital IT strategists/practitioners, EA practitioners, students in universities and graduate schools.” (From the Foreword by Scott A. Bernard) “In this new age of the digital information society, it is necessary to advocate a new EA framework. This book provides state-of-the art knowledge and practices about EA frameworks beneficial for IT practitioners, IT strategists, CIO, IT architects, and even students. It serves as an introductory textbook for all who drive the information society in this era.” (From the Foreword by Jun Murai)

Driving Efficiency in Local Government Using a Collaborative Enterprise Architecture Framework: Emerging Research and Opportunities

The Top-Selling, De Facto Guide to SOA--Now Updated with New Content and Coverage of Microservices! For more than a decade, Thomas Erl’s best-selling Service-Oriented Architecture: Concepts, Technology, and Design has been the definitive end-to-end tutorial on SOA, service-orientation, and service technologies. Now, Erl has thoroughly updated the industry’s de facto guide to SOA to reflect new practices, technologies, and strategies that have emerged through hard-won experience and creative innovation. This Second Edition officially introduces microservices and microtask abstraction as part of service-oriented architecture and its
associated service layers. Updated case study examples and illustrations further explain and position the microservice model alongside and in relation to more traditional types of services. Coverage includes: ● Easy-to-understand, plain English explanations of SOA and service-orientation fundamentals (as compiled from series titles) ● Microservices, micro task abstraction, and containerization ● Service delivery lifecycle and associated phases ● Analysis and conceptualization of services and microservices ● Service API design with REST services, web services, and microservices ● Modern service API and contract versioning techniques for web services and REST services ● Up-to-date appendices with service-orientation principles, REST constraints, and SOA patterns (including three new patterns) Service-Oriented Architecture: Analysis and Design for Services and Microservices, Second Edition, will be indispensable to application architects, enterprise architects, software developers, and any IT professionals interested in learning about or responsible for designing or implementing modern-day, service-oriented solutions. Chapter 1: Introduction Chapter 2: Case Study Backgrounds Part I: Fundamentals Chapter 3: Understanding Service-Oriented Chapter 4: Understanding SOA Chapter 5: Understanding Layers with Services and Microservices Part II: Service-Oriented Analysis and Design Chapter 6: Analysis and Modeling with Web Services and Microservices Chapter 7: Analysis and Modeling with REST Services and Microservices Chapter 8: Service API and Contract Design with Web Services Chapter 9: Service API and Contract Design with REST Services and Microservices Chapter 10: Service API and Contract Versioning with Web Services and REST Services Part III: Appendices Appendix A: Service-Orientation Principles Reference Appendix B: REST Constraints Reference Appendix C: SOA Design Patterns Reference Appendix D: The Annotated SOA Manifesto

I Heart Logs

Smart Sensors Networks: Communication Technologies and Intelligent Applications explores the latest sensor and sensor networks techniques and applications, showing how networked wireless sensors are used to monitor and gather intelligence from our surrounding environment. It provides a systematic look at the unique characteristics of wireless sensor networks through their usage in a broad range of areas, including healthcare for the elderly, energy consumption, industrial automation, intelligent transportation systems, smart homes and cities, and more. The book shows how sensor-networks work and how they are applied to monitor our surrounding environment. It explores the most important aspects of modern sensors technologies, providing insights on the newest technologies and the systems needed to operate them. Readers will find the book to be an entry point for understanding the fundamental differences between the various sensor technologies and their use in for different scenarios. Indexing: The books of this series are submitted to EI-Compendex and SCOPUS. Presents numerous specific use-cases throughout, showing practical applications of concepts Collects, in one place, the latest thinking on an emerging topic Addresses the security and privacy issues inherent in sensor deployment

Intelligent Interactive Multimedia Systems and Services

Your one-stop guide to the common patterns and practices, showing you how to apply these using the Go programming language About This Book This short, concise, and practical guide is packed with real-world examples of building microservices with Go It is easy to read and will benefit smaller teams who want to extend the functionality of their existing systems Using this practical approach will save your money in terms of maintaining a monolithic architecture and demonstrate capabilities in ease of use Who This Book Is For You should have a working knowledge of programming in Go, including writing and compiling basic applications. However, no knowledge
of RESTful architecture, microservices, or web services is expected. If you are looking to apply
techniques to your own projects, taking your first steps into microservice architecture, this book is
for you. What You Will Learn Plan a microservice architecture and design a microservice Write a
microservice with a RESTful API and a database Understand the common idioms and common
patterns in microservices architecture Leverage tools and automation that helps microservices
become horizontally scalable Get a grounding in containerization with Docker and Docker-
Compose, which will greatly accelerate your development lifecycle Manage and secure
Microservices at scale with monitoring, logging, service discovery, and automation Test
microservices and integrate API tests in Go In Detail Microservice architecture is sweeping the
world as the de facto pattern to build web-based applications. Golang is a language particularly
well suited to building them. Its strong community, encouragement of idiomatic style, and
statically-linked binary artifacts make integrating it with other technologies and managing
microservices at scale consistent and intuitive. This book will teach you the common patterns and
practices, showing you how to apply these using the Go programming language. It will teach you
the fundamental concepts of architectural design and RESTful communication, and show you
patterns that provide manageable code that is supportable in development and at scale in
production. We will provide you with examples on how to put these concepts and patterns into
practice with Go. Whether you are planning a new application or working in an existing monolith,
this book will explain and illustrate with practical examples how teams of all sizes can start solving
problems with microservices. It will help you understand Docker and Docker-Compose and how it
can be used to isolate microservice dependencies and build environments. We finish off by
showing you various techniques to monitor, test, and secure your microservices. By the end, you
will know the benefits of system resilience of a microservice and the advantages of Go stack. Style
and approach The step-by-step tutorial focuses on building microservices. Each chapter expands
upon the previous one, teaching you the main skills and techniques required to be a successful
microservice practitioner.

Achieving DevOps

Architect and design highly scalable, robust, clean and highly performant applications in .NET
Core About This Book Incorporate architectural soft-skills such as DevOps and Agile
methodologies to enhance program-level objectives Gain knowledge of architectural approaches
on the likes of SOA architecture and microservices to provide traceability and rationale for
architectural decisions Explore a variety of practical use cases and code examples to implement
the tools and techniques described in the book Who This Book Is For This book is for experienced
.NET developers who are aspiring to become architects of enterprise-grade applications, as well as
software architects who would like to leverage .NET to create effective blueprints of applications.
What You Will Learn Grasp the important aspects and best practices of application lifecycle
management Leverage the popular ALM tools, application insights, and their usage to monitor
performance, testability, and optimization tools in an enterprise Explore various authentication
models such as social media-based authentication, 2FA and OpenID Connect, learn authorization
techniques Explore Azure with various solution approaches for Microservices and Serverless
architecture along with Docker containers Gain knowledge about the recent market trends and
practices and how they can be achieved with .NET Core and Microsoft tools and technologies In
Detail If you want to design and develop enterprise applications using .NET Core as the
development framework and learn about industry-wide best practices and guidelines, then this
book is for you. The book starts with a brief introduction to enterprise architecture, which will
help you to understand what enterprise architecture is and what the key components are. It will
then teach you about the types of patterns and the principles of software development, and explain
the various aspects of distributed computing to keep your applications effective and scalable.
These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques required to become a successful software architect.

**HoloLens Blueprints**

Create applications using Industry 4.0. Discover how artificial intelligence (AI) and machine learning (ML) capabilities can be enhanced using the Internet of things (IoT) and secured using Blockchain, so your latest app can be not just smarter but also more connected and more secure than ever before. This book covers the latest easy-to-use APIs and services from Microsoft, including Azure IoT, Cognitive Services APIs, Blockchain as a Service (BaaS), and Machine Learning Studio. As you work through the book, you'll get hands-on experience building an example solution that uses all of these technologies—an IoT suite for a smart healthcare facility. Hosted on Azure and networked using Azure IoT, the solution includes centralized patient monitoring, using Cognitive Services APIs for face detection, recognition, and tracking. Blockchain is used to create trust-based security and inventory management. Machine learning is used to create predictive solutions to proactively improve quality of life. By the end of the book, you'll be confident creating richer and smarter applications using these technologies. What You'll Learn Know the technologies underpinning Industry 4.0 and AI 2.0 Develop real-time solutions using IoT in Azure Bring the smart capabilities of AI 2.0 into your application using a simple API call Host and manage your solution on Azure Understand Blockchain as a Service Capture and analyze data on the fly Make predictions using existing data Who This Book Is For Novice and intermediate .NET developers and architects who want to learn what it takes to create a modern or next-generation application

**Outcome-Driven Business Architecture**

Avoid getting lost in the complexity of Azure with The Azure Cloud Native Architecture Mapbook. This book will give you an expert-guided tour of Azure and help you map different architectural perspectives for various architecture disciplines. You'll learn how to apply the different architectural styles and become a better Azure Architect.

**Developing Cloud Native Applications in Azure using .NET Core**

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 fulfill 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
Building Microservices with Go

This book presents the proceedings of the KES International Conferences on Innovation in Medicine and Healthcare (KES-InMed-19), held in Split, Croatia, on June 17–19, 2020. Covering a number of key areas, including digital IT architecture in healthcare; advanced ICT for medicine and healthcare; biomedical engineering, trends, research and technologies; and healthcare support systems, this book is a valuable resource for researchers, managers, industrialists and anyone wishing to gain an overview of the latest research in these fields.

Balancing Agile and Disciplined Engineering and Management Approaches for IT Services and Software Products

A Série Universitária foi desenvolvida pelo Senac São Paulo com o intuito de preparar profissionais para o mercado de trabalho. Os títulos abrangem diversas áreas, abordando desde conhecimentos teóricos e práticos adequados às exigências profissionais até a formação ética e sólida. Análise de sistemas aborda o ciclo de vida de desenvolvimento de sistemas de software, apresentando modelos, metodologias, ferramentas de desenvolvimento, fundamentos e características do gerenciamento de projetos de sistemas de software, suas principais etapas e atividades. Abrange os principais elementos e métodos de identificação e análise de requisitos de sistemas e discute as principais ferramentas utilizadas no processo de desenvolvimento de software. Por fim, apresenta conceitos essenciais da lógica de programação, principais estruturas, comandos e operações. Esta obra tem como principal objetivo apresentar ao leitor um panorama dos princípios da engenharia de software.

Microservices with Azure

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.

IoT Solutions in Microsoft’s Azure IoT Suite

Book + Content Update Program “Beyond just describing the basics, this book dives into best practices every aspiring microservices developer or architect should know.” —Foreword by Corey
Sanders, Partner Director of Program Management, Azure Microservice-based applications enable unprecedented agility and ease of management, and Docker containers are ideal for building them. Microsoft Azure offers all the foundational technology and higher-level services you need to develop and run any microservices application. Microservices with Docker on Microsoft Azure brings together essential knowledge for creating these applications from the ground up, or incrementally deconstructing monolithic applications over time. The authors draw on their pioneering experience helping to develop Azure's microservices features and collaborating with Microsoft product teams who've relied on microservices architectures for years. They illuminate the benefits and challenges of microservices development and share best practices all developers and architects should know. You'll gain hands-on expertise through a detailed sample application, downloadable at github.com/flakio/flakio.github.io. Step by step, you'll walk through working with services written in Node.js, Go, and ASP.NET 5, using diverse data stores (mysql, elasticsearch, block storage). The authors guide you through using Docker Hub as a service registry, and Microsoft Azure Container service for cluster management and service orchestration. Coverage includes: Recognizing how microservices architectures are different, and when they make sense Understanding Docker containers in the context of microservices architectures Building, pulling, and layering Docker images Working with Docker volumes, containers, images, tags, and logs Using Docker Swarm, Docker Compose, and Docker Networks Creating Docker hosts using the Azure portal, Azure Resource Manager, the command line, docker-machine, or locally via Docker toolbox Establishing development and DevOps environments to support microservices applications Making the most of Docker's continuous delivery options Using Azure's cluster and container orchestration capabilities to operate and scale containerized microservices applications with maximum resilience Monitoring microservices applications with Azure Diagnostics, Visual Studio Application Insights, and Microsoft Operations Management Suite Developing microservices applications faster and more effectively with Azure Service Fabric An extensive sample application demonstrating the microservices concepts discussed throughout the book is available online In addition, this book is part of InformIT's exciting new Content Update Program, which provides content updates for major technology improvements! As significant updates are made to Docker and Azure, sections of this book will be updated or new sections will be added to match the updates to the technologies. As updates become available, they will be delivered to you via a free Web Edition of this book, which can be accessed with any Internet connection. To learn more, visit informit.com/cup. How to access the Web Edition: Follow the instructions inside to learn how to register your book to access the FREE Web Edition.

97 Things Every Cloud Engineer Should Know

This book contains the proceedings of the KES International conferences on Innovation in Medicine and Healthcare (KES-InMed-19) and Intelligent Interactive Multimedia Systems and Services (KES-IIMSS-19), held on 17–19 June 2019 and co-located in St. Julians, on the island of Malta, as part of the KES Smart Digital Futures 2019 multi-theme conference. The major areas covered by KES-InMed-19 include: Digital IT Architecture in Healthcare; Advanced ICT for Medical and Healthcare; Biomedical Engineering, Trends, Research and Technologies and Healthcare Support System. The major areas covered by KES-IIMSS-19 were: Interactive Technologies; Artificial Intelligence and Data Analytics; Intelligent Services and Architectures and Applications. This book is of use to researchers in these vibrant areas, managers, industrialists and anyone wishing to gain an overview of the latest research in these fields.

Enterprise Application Architecture with .NET Core
Discover the essential design and architectural patterns with ASP.NET Core to solve common software design problems. With this book, you’ll learn how to use a combination of design patterns and build fault-tolerant and robust full-stack apps and microservices with ASP.NET Core and C#.

**Complexity in Information Systems Development**

The overall functions of a government impact a wide range of sectors in society. It is imperative for governments to work at full capacity and potential in order to ensure quality progress for its citizens. Driving Efficiency in Local Government Using a Collaborative Enterprise Architecture Framework: Emerging Research and Opportunities is an essential scholarly publication for the latest research on methods for smart government initiatives and implementations, and addresses prevalent internal and external security risks. Featuring extensive coverage on a broad range of topics such as technology funds, mobile technology, and cloud computing, this book is ideally designed for professionals, academicians, researchers, and students seeking current research on the ways in which governments can advance and prosper.

**Enterprise Architecture for Global Companies in a Digital IT Era**

Unveil the world of mixed reality with HoloLens About This Book Bring holographic insights to existing line-of-business applications, tools, and workflows Focus on developing end-to-end realistic holographic application. Build interactive model scripts and test them in Unity3D and holographic emulators Who This Book Is For This book is targeted at developers and designers working on mixed-reality developments for complex integrated scenarios using HoloLens. What You Will Learn Interact with holograms using different interaction models Develop your first holographic app Integrate holographic applications with cloud systems Visualize data feeds coming from the cloud through holograms Manage the application distribution of enterprise-enabled HoloLens Integrate HoloLens applications with services deployed on Azure Identify and create 3D Assets and Scenes Use HoloLens to explore the Internet of Things In Detail Do you want to create stunning applications with HoloLens? Are you a developer who is fascinated with Microsoft HoloLens and its capabilities? If so, this is the book for you. This book introduces and demystifies the HoloLens platform and shows you different ways of interaction with computers (mixed-reality). You will start your mixed-reality journey by understanding different types of digital reality. You will learn to build your first holographic app. Also, you will understand holographic application integration possibilities within Line of Business Applications using Azure. Moving ahead, you will create Integrated Solutions using IoT with HoloLens. Gradually you’ll learn how to create and deploy apps on a device. You will learn to publish application to the store; if you are an enterprise developer, you will also manage and distribute applications for enterprise-enabled or domain-joined HoloLens. Finally, you will develop an end-to-end realistic holographic app, ranging from scenario identification to sketching, development, deployment, and, finally, production. Style and approach The book is a project-based guide to help you to create some really astonishing mixed-reality applications. It will provide end-to-end solutions and enable you to build stunning applications for HoloLens.

**Análise de sistemas**

This volume presents a series of carefully selected papers on the theme of Intelligent Interactive Multimedia Systems and Services (IIMSS-18), but also including contributions on Innovation in Medicine and Healthcare (InMed-18) and Smart Transportation Systems (STS-18). The papers
were presented at the Smart Digital Futures 2018 multi-theme conference, which grouped the AMSTA, IDT, InMed, SEEL, STS and IIMSS conferences in one venue in Gold Coast, Australia in June 2018. IIMSS-18 included sessions on 'Cognitive Systems and Big Data Analytics', 'Data Processing and Secure Systems', 'Innovative Information Services for Advanced Knowledge Activity', 'Autonomous System' and 'Image Processing'. InMed-18 papers cover major areas of 'Digital Architecture for Internet of Things, Big data, Cloud and Mobile IT in Healthcare' and 'Advanced ICT for Medical and Healthcare'. STS-18 papers provide a comprehensive overview of various aspects of current research into intelligent transportation technology.

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