

Learning Core Data For ios A Hands On Guide To Building Core Data Applications

Summary Objective-C Fundamentals is a hands-on tutorial that leads you from your first line of Objective-C code through the process of building native apps for the iPhone using the latest version of the SDK. You'll learn to avoid the most common pitfalls, while exploring the expressive Objective-C language through numerous example projects. About the Technology The iPhone is a sophisticated device, and mastering the Objective C language is the key to unlocking its awesome potential as a mobile computing platform. Objective C's concise, rich syntax and feature set, when matched with the iPhone SDK and the powerful Xcode environment, offers a developers from any background a smooth transition into mobile app development for the iPhone. About the Book Objective-C Fundamentals guides you gradually from your first line of Objective-C code through the process of building native apps for the iPhone. Starting with chapter one, you'll dive into iPhone development by building a simple game that you can run immediately. You'll use tools like Xcode 4 and the debugger that will help you become a more efficient programmer. By working through numerous easy-to-follow examples, you'll learn practical techniques and patterns you can use to create solid and stable apps. And you'll find out how to avoid the most common pitfalls. No iOS or mobile experience is required to benefit from this book but familiarity with programming in general is helpful.

Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Objective-C from the ground up Developing with Xcode 4 Examples that work unmodified on iPhone Table of Contents PART 1 GETTING STARTED WITH OBJECTIVE-C Building your first iOS application Data types, variables, and constants An introduction to objects Storing data in collections PART 2 BUILDING YOUR OWN OBJECTS Creating classes Extending classes Protocols Dynamic typing and runtime type information Memory management PART 3 MAKING MAXIMUM USE OF FRAMEWORK FUNCTIONALITY Error and exception handling Key-Value Coding and NSPredicate Reading and writing application data Blocks and Grand Central Dispatch Debugging techniques

Learn the critical tips and techniques to make using Xcode for the iPhone, iPad, or Mac easier, and even fun. Explore the features and functionality of Xcode you may not have heard of. Go under the hood to discover how projects really work, so when they stop working, you'll know how to fix them. Explore the common problems developers face when using Xcode, and find out how to get the most out of your IDE. Dig into Xcode, and you'll discover it's richer and more powerful than you might have thought. Get a huge productivity boost by working with Xcode instead of against it. Instead of hacky code fixes and manual processes, once you know the the why and how of Xcode's process, you'll discover that doing things Xcode's way makes your app development more elegant and less aggravating. Explore the major features of Xcode: project management, building UIs with storyboards, code editing, compiling apps, fixing bugs and performance problems, unit- and UI testing, and source code management. Go beyond the basics and explore tasks that professionals deal with when they're working on big projects. Create storyboards that many developers can work on at once, even as projects grow to hundreds or thousands of files. Find the tools that make the code editor pleasant to work with, even in long coding sessions. Discover the right way to find and fix bugs when you have lots of code that's not always playing nicely together. Dig into specific and little-discussed features that help developers on Apple's other platforms: macOS, watchOS, and tvOS. When you're ready to distribute your app, learn how Apple's code-signing system really works. Find out when to let Xcode handle it automatically, and how to do it manually when needed. Discover how much easier and more fun iOS development is when you know the secrets of the tools. What You

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Need: This book requires Xcode 9 and a Mac running macOS High Sierra (10.13.2) or later. Additionally, an iOS device is recommended for on-device testing but not required.

Get Started Fast with iOS 7 Core Data App Development Covers iOS 7 and Xcode 5 This is the first Core Data book to fully reflect Apple's latest platform innovations, including its dramatic recent improvements to iCloud support. Hands-on from start to finish, it teaches you step-by-step as you create a modern data-driven iOS app using Storyboards, ARC, iOS 7, and Xcode 5. Tim Roadley introduces new patterns and best practices designed to overcome the frustrations of Core Data development. One step at a time, you'll build and extend your skills--even mastering advanced techniques such as complex model migration, deep copy, background processing, and integration with Dropbox, StackMob, and iCloud. Downloadable versions of this book's main project are provided with each chapter, so you can see exactly what your app project should look like--and get cookbook-style code for your own projects. Chapter exercises help you explore even further, whether you're a self-learner or a student in an iOS development course. If you're an experienced iOS developer, this guide brings together all the skills, tools, code, and patterns you need to add powerful data management capabilities to any app--quickly, easily, and painlessly. Coverage includes the following:

- Understanding Core Data Adding Core Data to an existing project
- Designing, upgrading, and migrating data models (automatically and manually with progress indication)
- Populating views with data, including table-views and picker-views
- Preloading a "default data" persistent store from XML
- Deep-copying from one persistent store to another
- Performance tuning with Instruments, using large photos as the example
- Background processing, using thumbnail generation as the example
- Efficient search
- Seamlessly backing up and restoring with Dropbox
- Stable integration with iCloud--with full support for multiple accounts, seeding, and de-duplication
- Web service integration with StackMob

Features hands-on sample projects and exercises designed to help programmers create iOS applications.

Leverage the power of Apple's Core ML to create smart iOS apps

Key Features

- Explore the concepts of machine learning and Apple's Core ML APIs
- Use Core ML to understand and transform images and videos
- Exploit the power of using CNN and RNN in iOS applications

Book Description

Core ML is a popular framework by Apple, with APIs designed to support various machine learning tasks. It allows you to train your machine learning models and then integrate them into your iOS apps. Machine Learning with Core ML is a fun and practical guide that not only demystifies Core ML but also sheds light on machine learning. In this book, you'll walk through realistic and interesting examples of machine learning in the context of mobile platforms (specifically iOS). You'll learn to implement Core ML for visual-based applications using the principles of transfer learning and neural networks. Having got to grips with the basics, you'll discover a series of seven examples, each providing a new use-case that uncovers how machine learning can be applied along with the related concepts. By the end of the book, you will have the skills required to put machine learning to work in their own applications, using the Core ML APIs

What you will learn

- Understand components of an ML project using algorithms, problems, and data
- Master Core ML by obtaining and importing machine learning model, and generate classes
- Prepare data for machine learning model and interpret results for optimized solutions
- Create and optimize custom layers for unsupported layers
- Apply CoreML to image and video data using CNN
- Learn the qualities of RNN to recognize sketches, and augment drawing
- Use Core ML transfer learning to execute style transfer on images

Who this book is for Machine Learning with Core ML is for you if you are an intermediate iOS developer interested in applying machine learning to your mobile apps. This book is also for those who are machine learning developers or deep learning practitioners who want to bring the power of neural networks in their iOS apps. Some exposure to machine learning concepts would be beneficial but not essential, as this book acts as a launchpad into

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the world of machine learning for developers.

Learn iPhone and iPad Programming via Tutorials! If you're new to iOS or Swift, or to programming in general, learning how to write an app can seem incredibly overwhelming. That's why you need a book that: Shows you how to write an app step-by-step. Has tons of illustrations and screenshots to make everything clear. Is written in a fun and easygoing manner! In this book, you will learn how to make your own iPhone and iPad apps, through four engaging, epic-length tutorials. These hands-on tutorials describe in full detail how to build a new app from scratch. Five tutorials, five apps. Each new app will be a little more advanced than the one before, and together they cover everything you need to know to make your own apps. By the end of the series you'll be experienced enough to turn your ideas into real apps that you can sell on the App Store.

Learn Data Structures & Algorithms in Swift! Data structures and algorithms form the basis of computer programming and are the starting point for anyone looking to become a software engineer. Choosing the proper data structure and algorithm involves understanding the many details and trade-offs of using them, which can be time-consuming to learn - and confusing. This is where this book, *Data Structures & Algorithms in Swift*, comes to the rescue! In this book, you'll learn the nuts and bolts of how fundamental data structures and algorithms work by using easy-to-follow tutorials loaded with illustrations; you'll also learn by working in Swift playground code. Who This Book Is For This book is for developers who know the basics of Swift syntax and want a better theoretical understanding of what data structures and algorithms are to build more complex programs or ace a whiteboard interview. Topics Covered in *Data Structures & Algorithms in Swift* *Basic data structures and algorithms, including stacks, queues and linked lists. *How protocols can be used to generalize algorithms. *How to leverage the algorithms of the Swift standard library with your own data structures. *Trees, tries and graphs. *Building algorithms on top of other primitives. *A complete spectrum of sorting algorithms from simple to advanced. *How to think about algorithmic complexity. *Finding shortest paths, traversals, subgraphs and much more. After reading this book, you'll have a solid foundation on data structures and algorithms and be ready to solve more complex problems in your apps elegantly.

A fast-paced, example-driven guide to data-driven iPhone, iPad, and iPod Touch applications.

Based on Big Nerd Ranch's popular iPhone Bootcamp class, *iPhone Programming: The Big Nerd Ranch Guide* leads you through the essential tools and techniques for developing applications for the iPhone, iPad, and iPod Touch. In each chapter, you will learn programming concepts and apply them immediately as you build an application or enhance one from a previous chapter. These applications have been carefully designed and tested to teach the associated concepts and to provide practice working with the standard development tools Xcode, Interface Builder, and Instruments. The guide's learn-while-doing approach delivers the practical knowledge and experience you need to design and build real-world applications. Here are some of the topics covered: Dynamic interfaces with animation Using the camera and photo library User location and mapping services Accessing accelerometer data Handling multi-touch gestures Navigation and tabbed applications Tables and creating custom rows Multiple ways of storing and loading data: archiving, Core Data, SQLite Communicating with web services ALocalization/Internationalization "After many 'false starts' with other iPhone development books, these clear and concise tutorials made the concepts gel for me. This book is a definite must have for any budding iPhone developer." –Peter Watling, New Zealand, Developer of BubbleWrap

"Not many books have a single project that lives and evolves through the entire narrative. The reason not many books do this is because it is difficult to do well. Important toolkit features get shoehorned in weird places because the author didn't do enough up-front design time. This

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book, though, takes you from design, to a prototype, to the Real Deal. And then it goes further.” —Mark Dalrymple, cofounder of CocoaHeads, the international Mac and iPhone programmer community; author of *Advanced Mac OS X Programming: The Big Nerd Ranch Guide Learning iPad Programming, Second Edition*, will help you master all facets of iPad programming with Apple’s newest tools. Its in-depth, hands-on coverage fully addresses the entire development process, from installing the iOS SDK through coding, debugging, submitting apps for Apple’s review, and deployment. Extensively updated for Apple’s newest iOS features and Xcode 4.x updates, this book teaches iPad programming through a series of exercises centered on building PhotoWheel, a powerful personal photo library app. As you build PhotoWheel, you’ll gain experience and real-world insights that will help you succeed with any iPad development project. Leading iOS developers Kirby Turner and Tom Harrington introduce the essentials of iOS development, focusing on features that are specific to iPad. You’ll find expert coverage of key topics many iOS development books ignore, from app design to Core Data. You’ll also learn to make the most of crucial iOS and Xcode features, such as Storyboarding and Automatic Reference Counting (ARC), and extend your app with web services and the latest iCloud syncing techniques. Learn how to Build a fully functional app that uses Core Data and iCloud syncing Use Storyboarding to quickly prototype a functional UI and then extend it with code Create powerful visual effects with Core Animation and Core Image Support AirPrint printing and AirPlay slideshows Build collection views and custom views, and use custom segues to perform custom view transitions Download the free version of PhotoWheel from the App Store today! Import, manage, and share your photos as you learn how to build this powerful app.

Core Data is Apple's data storage framework: it's powerful, built-in, and can integrate with iCloud. Discover all of Core Data's powerful capabilities, learn fundamental principles including thread and memory management, and add Core Data to both your iOS and OS X projects. All examples in this edition are based on Objective-C and are up-to-date for the latest versions of OS X El Capitan and iOS 9. Core Data expert Marcus Zarra walks you through a fully developed application based around the Core Data APIs. You'll build on this application throughout the book, learning key Core Data principles such as NSPredicate, NSFetchRequest, thread management, and memory management. Start with the basics of Core Data and learn how to use it to develop your application. Then delve deep into the API details. Explore how to get Core Data integrated into your application properly, and work with this flexible API to create convenience methods to improve your application's maintainability. Reduce your migration difficulties, integrate your Core Data app with iCloud and Watch Kit, and use Core Data in a queue-based environment. By the end of the book, you'll have built a full-featured application, gained a complete understanding of Core Data, and learned how to integrate your application into the iPhone/iPad platform. This third edition updates all examples for OS X El Capitan and iOS 9, and gets you up to speed on changes in multithreading and batch processing. There's a new chapter on efficiently importing data from a network location, and a new discussion of how best to pre-load data into your application. What You Need: Mac OS X El Capitan and iOS 9 and a basic working knowledge of Objective-C

Ready to build mobile apps that out-perform the rest? If you're an iOS developer with app-building experience, this practical guide provides tips and best practices to help you solve many common performance issues. You'll learn how to design and optimize iOS apps that deliver a smooth experience even when the network is poor and memory is low. Today's picky users want fast and responsive apps that don't hog resources. In this book, author Gaurav Vaish demonstrates methods for writing optimal code from an engineering perspective, using reusable Objective-C code that you can use right away. Up your game and create high-performance native iOS apps that truly stand out from the crowd. Measure key performance indicators—attributes that constitute and affect app performance Write efficient apps by

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minimizing memory and power consumption, and explore options for using available CPU cores Optimize your app's lifecycle and UI, as well as its networking, data sharing, and security features Learn about application testing, debugging and analysis tools, and monitoring your app in the wild Collect data from real users to analyze app usage, identify bottlenecks, and provide fixes Use iOS 9 upgrades to improve your app's performance

Dive into Combine! Writing asynchronous code can be challenging, with a variety of possible interfaces to represent, perform, and consume asynchronous work - delegates, notification center, KVO, closures, etc. Juggling all of these different mechanisms can be somewhat overwhelming. Does it have to be this hard? Not anymore! In this book, you'll learn about Combine - Apple's framework to work with asynchronous events in a unified and reactive way that ensures your app is always up to date based on the latest state of its data. Who This Book Is For This book is for intermediate iOS developers who already know the basics of iOS and Swift development but are interested in learning declarative/reactive programming and take their app and state management to the next level. You'll also find this book interesting if you're interested in SwiftUI - as many of the reactive capabilities keeping your SwiftUI views up-to-date are built on top of Combine. Topics Covered in Combine: Asynchronous Programming with Swift What & Why: Learn what is Combine and reactive programming and the problems they solve, and how you can unify all of your asynchronous piece of work. Operators: Learn how to compose, transform, filter and otherwise manipulate different pieces of asynchronous work using operators. In Practice: You'll gain knowledge on various topics and techniques you'll leverage when writing your own real-life apps, as well as practice these techniques with actual hands-on apps and projects. SwiftUI: You'll learn about how Combine is deeply rooted within SwiftUI and provides it with the ability to reactively update its views based on the state of your app. Advanced Combine: Once you've got a handle on the basics, you'll dive into advanced Combine topics such as Error Handling, Schedulers, and Custom Publishers. By the end of this book, you'll be a pro in building full-fledged applications using Combine's various abilities.

Coding is awesome. So is being outside. With location-based iOS apps, you can combine the two for an enhanced outdoor experience. Use Swift to create your own apps that use GPS data, read sensor data from your iPhone, draw on maps, automate with geofences, and store augmented reality world maps. You'll have a great time without even noticing that you're learning. And even better, each of the projects is designed to be extended and eventually submitted to the App Store. Explore, share, and have fun. Location-based apps are everywhere. From mapping our jogging path to pointing us to the nearest collectible creature in a location-based game, these apps offer useful and interesting features and information related to where you are. Using real-world maps and places as the environment, they add an extra layer of adventure to exploring the outdoors. If you've ever wanted to make your own location-based apps and games, you can learn how with four simple, Swift-based projects that are easy to code and fun to use. Build four stunning apps that sense the iPhone's surroundings. Use Core Location and MapKit to draw GPS data on maps and share the results to social media. Use the sensor data from the iPhone and draw acceleration graphs using Core Graphics while on a playground swing. Build an app that measures the time you spend outside using geofences. Combine Core Location and ARKit to build an augmented reality scavenger hunt app that you can use and play with other people. Have great time building creative apps you cannot wait to try out.

Apply Different Architectures to Your Codebase! Advanced iOS App Architecture guides you through building one real-world app written in different architectures to give you hands-on and practical experience working in different architectures. This book will also guide you through the theory you need to gain a solid foundation of architecture concepts so that you can make your own informed decisions on how to use them in your codebase. Who This Book Is For This

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book is for intermediate iOS developers who already know the basics of iOS and are looking to build apps using defined architectures, making apps cleaner and easier to maintain. Topics Covered in Advanced iOS App Architecture Navigating Architecture Topics: Learn the theory behind various architectures to help inform which works best for you in different situations you may face. Managing Dependencies: Learn how to manage dependencies both internally and externally within your app. MVVM Architecture: Explore the history of the MVVM architecture and begin building KOOBER - the book's project app - using MVVM principles. Redux Architecture: Explore the history of the Redux architecture and continue building KOOBER using Redux principles. Elements Architecture: Explore the history of the Elements architecture and continue building KOOBER using Elements principles. SwiftUI: Explore SwiftUI and find out how to adapt existing application architectures for use with SwiftUI. After reading this book, you'll have the knowledge to decide which types of architecture components suit your apps and you'll have a deep understanding of the covered architectures. About the iOS Architecture Team The architecture team is a group of seasoned developers who work for large multi-national companies who deal with large and diverse code bases on a daily basis. The knowledge procured over years of development is now being transferred to you through book. We hope you enjoy the book and, hopefully, you'll apply some of the architectures you've learned to your own apps

Machine learning, now more than ever, plays a pivotal role in almost everything we do in our digital lives. Whether it's interacting with a virtual assistant like Siri or typing out a message to a friend, machine learning is the technology facilitating those actions. It's clear that machine learning is here to stay, and as such, it's a vital skill to have in the upcoming decades. This book covers Core ML in-depth. You will learn how to create and deploy your own machine learning model. On top of that, you will learn about Turi Create, Create ML, Keras, Firebase, and Jupyter Notebooks, just to name a few. These are a few examples of professional tools which are staples for many machine learning experts. By going through this book, you'll also become proficient with Python, the language that's most frequently used for machine learning. Plus, you would have created a handful of ready-to-use apps such as barcode scanners, image classifiers, and language translators. Most importantly, you will master the ins-and-outs of Core ML.

SwiftUI is an innovative new framework to build UI for all Apple platforms using Swift. This recipe-based guide covers the new features of SwiftUI 2 introduced on iOS14 and helps you migrate from UIKit with a simple learning curve through practical solutions. Learn how SwiftUI combines with Apple dev tools to build truly cross-platform Apple apps.

Apple's iPhone and iPod Touch not only feature the world's most powerful mobile operating system, they also usher in a new standard of human-computer interaction through gestural interfaces and multi-touch navigation. This book provides you with a hands-on, example-driven tour of UIKit, Apple's user interface toolkit, and includes common design patterns to help you create new iPhone and iPod Touch user experiences. Using Apple's Cocoa Touch framework, you'll learn how to build applications that respond in unique ways when users tap, slide, swipe, tilt, shake, or pinch the screen. Programming the iPhone User Experience is a perfect companion to Apple's Human Interface Guidelines, and provides the practical information you need to develop innovative applications for the iPhone and iPod Touch, whether you're a CTO, developer, or UI/UX designer. Understand the basics of the Cocoa Touch framework for

building iPhone and iPod Touch applications Learn theory and best practices for using Cocoa Touch to develop applications with engaging and effective user interfaces Apply your knowledge of Objective-C to the iPhone/iPod Touch framework Customize standard UIKit views according to Apple's Human Interface Guidelines and usability principles Learn patterns for handling user experience concerns outside of the interface, such as network- and location-awareness Audio can affect the human brain in the most powerful and profound ways. Using Apple's Core Audio, you can leverage all that power in your own Mac and iOS software, implementing features ranging from audio capture to real-time effects, MP3 playback to virtual instruments, web radio to VoIP support. The most sophisticated audio programming system ever created, Core Audio is not simple. In Learning Core Audio , top Mac programming author Chris Adamson and legendary Core Audio expert Kevin Avila fully explain this challenging framework, enabling experienced Mac or iOS programmers to make the most of it. In plain language, Adamson and Avila explain what Core Audio can do, how it works, and how it builds on the natural phenomena of sound and the human language of audio. Next, using crystal-clear code examples, they guide you through recording, playback, format conversion, Audio Units, 3D audio MIDI connectivity, and overcoming unique challenges of Core Audio programming for iOS. Coverage includes: mastering Core Audio's surprising style and conventions; recording and playback with Audio Queue; synthesizing audio; perform effects on audio streams; capturing from the mic; mixing multiple streams; managing file streams; converting formats; creating 3D positional audio; using Core MIDI on the Mac; leveraging your Cocoa and Objective-C expertise in Core Audio's C-based environment, and much more. When you've mastered the "black arts" of Core Audio, you can do some serious magic. This book will transform you from an acolyte into a true Core Audio wizard.

Apple has made it easy to get started developing for iOS out of the box. To access the true power of iOS, however, you need to go beyond these simple tools and APIs. Experienced app developer Shawn Welch teaches you how to tap into the true potential of iOS by incorporating some of the most powerful technologies it has to offer. Using Core Data and iCloud, you'll learn how to store information locally and sync seamlessly across multiple devices and platforms. Leverage iOS 5's new Twitter APIs, which provide painless Twitter and OAuth support using the new Accounts framework. Use Location Services to incorporate new iOS 5 features, such as reverse geolocation lookup and region notifications. Incorporate rich media into your apps using Graphics, Animation, Audio, Video, and post-processing photo filters and analysis through Core Image. Finally, explore Newsstand, which lets you create your own periodical content and push new content to devices, even when the app is not running.

"In this Learning Core Data for iOS and OS X training course, expert author Jesse Feiler teaches you how to effectively develop Core Data apps for Cocoa and Cocoa Touch using Swift and OS X. This course is designed for users that

are familiar with Xcode and have experience with the Cocoa or Cocoa Touch framework. You will start by learning how to build an app with Core Data from a template, then jump into exploring the Core Data stack. From there, Jesse will teach you how to build a simple data model, build a model with relationships, and create a relationship with the table. This video tutorial also covers using the simple model and relationship in the template, exploring attributes, using iCloud and external stores, and changing the storyboard and view controller. You will also learn how to create a subclass for your entity, how to use key-value data, how to use fetch requests, and how to use transformations. Finally, you will learn how to prepare for and use lightweight migration. Once you have completed this computer based training course, you will have learned how to develop your own apps for Cocoa and Cocoa Touch with Xcode."--Resource description page.

Get Started Fast with Core Data App Development Using iOS 9, Swift, and Xcode 7 Core Data is a remarkably mature, stable, and fast platform for data access, and Swift is a world-class language for applying it. Now, there's a complete guide to using Core Data and Swift together in production apps. Tim Roadley shows you how to gain the benefits of a relational database without writing SQL queries, so you can get more done faster, with less coding. This book fully reflects Apple's latest iOS 9 platform innovations and teaches Core Data entirely with Swift examples. It guides you step-by-step through creating a modern data-driven iOS app that fully integrates iCloud via CloudKit for public data sharing. Roadley introduces up-to-date patterns and best practices designed to overcome the frustrations of Core Data development. Each chapter builds on the last, introducing new topics in the order you'll implement them and extending your skills simply and intuitively. Each chapter offers downloadable project code, along with exercises to help you explore even further, either as a self-learner or a student in an iOS development course. Roadley even shows how to build helper classes that simplify reuse of his example code. If you're an experienced iOS developer, here are all the Swift skills and resources you need to integrate data into any app—quickly, easily, and painlessly. Coverage includes

- Understanding what Core Data is and what it can (and can't) do
- Configuring basic managed object models, and choosing data types
- Expanding data models without introducing errors
- Using relationships and entity inheritance to unlock more power
- Delivering memory-efficient, high performance table views
- Enabling users to easily modify managed object attributes
- Generating persistent stores of preloaded default data
- Using Deep Copy to copy objects and relationships between persistent stores
- Optimizing performance by eliminating bottlenecks and offloading intensive tasks to the background
- Implementing efficient search
- Integrating diverse iCloud accounts and preferences
- Mastering advanced iCloud integration, including entity-level seeding and unique object de-dupe
- Leveraging public CloudKit databases to sync data across users with different iCloud accounts

About the Website All code samples are available for download at timroadley.com. informit.com/learningseries timroadley.com

Learn how to use the power of Xcode to turn your next great app idea into a reality About This Book Learn the theory and tools behind app development using Swift 3 and Xcode 8 Build a fully featured iOS app, including a companion app for the Apple Watch Optimize, debug, and ultimately release your app on Test Flight and the App Store Who This Book Is For This book is intended for programmers looking to get a jump-start into the world of iOS development. Whether you're a young student who has only spent a few months with Java, or a seasoned developer who has spent their career developing for a different platform, all that is expected is a basic understanding of a programming language such as C++, C#, or Java. What You Will Learn Understand the most important features of the Xcode IDE Write Swift 3 code for application data models and view controllers Prepare visual layouts for an iOS application using storyboards, size classes, and auto-layout Integrate many common technologies into an app, such as multi-touch gestures, CoreData, and notifications Build companion applications for the Apple Watch with watchOS 3 Debug applications using Xcode's suite of debugging tools, and prevent bugs with unit testing Optimize an application using Xcode 8's profiling tools and asset catalogs Distribute a beta application through TestFlight, and a finished application through the App Store In Detail Over the last few years, we've seen a breakthrough in mobile computing and the birth of world-changing mobile apps. With a reputation as one of the most user-centric and developer-friendly platforms, iOS is the best place to launch your next great app idea. As the official tool to create iOS applications, Xcode is chock full of features aimed at making a developer's job easier, faster, and more fun. This book will take you from complete novice to a published app developer, and covers every step in between. You'll learn the basics of iOS application development by taking a guided tour through the Xcode software and Swift programming language, before putting that knowledge to use by building your first app called "Snippets." Over the course of the book, you will continue to explore the many facets of iOS development in Xcode by adding new features to your app, integrating gestures and sensors, and even creating an Apple Watch companion app. You'll also learn how to use the debugging tools, write unit tests, and optimize and distribute your app. By the time you make it to the end of this book, you will have successfully built and published your first iOS application. Style and approach This easy-to-follow guide presents topics in a hands-on lecture format where concepts are introduced and explained, then used in an example as reinforcement. The first third of the book covers the separate building blocks of development, while the second two thirds cover the development of an app from start to finish.

Summary iOS Development with Swift is a hands-on guide to creating apps for iPhone and iPad using the Swift language. Inside, you'll be guided through every step of the process for building an app, from first idea to App Store. This book fully covers Swift 4, Xcode 9, and iOS 1. Our video course, iOS Development with Swift in Motion, is the perfect companion to this book, featuring even more

projects and examples for you to dig into in the exciting world of iOS development. Find out more at our website: www.manning.com/livevideo/ios-development?t-with-swift-lv Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology One billion iPhone users are waiting for the next amazing app. It's time for you to build it! Apple's Swift language makes iOS development easier than ever, offering modern language features, seamless integration with all iOS libraries, and the top-notch Xcode development environment. And with this book, you'll get started fast. About the Book iOS Development with Swift is a hands-on guide to creating iOS apps. It takes you through the experience of building an app—from idea to App Store. After setting up your dev environment, you'll learn the basics by experimenting in Swift playgrounds. Then you'll build a simple app layout, adding features like animations and UI widgets. Along the way, you'll retrieve, format, and display data; interact with the camera and other device features; and touch on cloud and networking basics. What's Inside Create adaptive layouts Store and manage data Learn to write and debug Swift code Publish to the App Store Covers Swift 4, Xcode 9, and iOS 11 About the Reader Written for intermediate web or mobile developers. No prior experience with Swift assumed. About the Author Craig Grummitt is a successful developer, instructor, and mentor. His iOS apps have had over 100,000 downloads combined! Table of Contents PART 1 - INTRODUCING XCODE AND SWIFT Your first iOS application Introduction to Swift playgrounds Swift objects PART 2 - BUILDING YOUR INTERFACE View controllers, views, and outlets User interaction Adaptive layout More adaptive layout Keyboard notifications, animation, and scrolling PART 3 - BUILDING YOUR APP Tables and navigation Collections, searching, sorting, and tab bars Local data persistence Data persistence in iCloud Graphics and media Networking Debugging and testing PART 4 - FINALIZING YOUR APP Distributing your app What's next?

In just 24 sessions of one hour or less, start using Core Data to build powerful data-driven apps for iOS devices and Mac OS X computers! Using this book's straightforward, step-by-step approach, you'll discover how Apple's built-in data persistence framework can help you meet any data-related requirement, from casual to enterprise-class. Beginning with the absolute basics, you'll learn how to create data models, build interfaces, interact with users, work with data sources and table views. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success! Step-by-step instructions carefully walk you through the most common Core Data development tasks. Quizzes and Exercises at the end of each chapter help you test your knowledge. Notes present interesting information related to the discussion. Tips offer advice or show you easier ways to perform tasks. Cautions alert you to possible problems and give you advice on how to avoid them. Jesse Feiler is a leading expert on Apple database development. Feiler has worked with databases since the 1980s, writing about technologies that have since evolved

into Core Data. His database clients have included Federal Reserve Bank of New York, Young & Rubicam, and many small and nonprofit organizations. His recent books include Data-Driven iOS Apps for iPad and iPhone with FileMaker Pro, Bento by FileMaker, and FileMaker Go; and FileMaker 12 in Depth. Learn how to...

- Start writing database apps fast, with Xcode 4's powerful tools and templates
- Master the Objective-C features and patterns Core Data relies upon
- Understand Core Data's goals, components, and behavior
- Model data graphically with Xcode 4's Data Model Editor
- Leverage the full power of Managed Objects
- Use controllers to integrate your data model with your code
- Fetch, use, and store data from any source
- Develop interfaces and features more quickly with Interface Builder
- Add navigation and control features that integrate seamlessly with Core Data
- Interact with users via popovers, segmented controls, action sheets, and tab bars
- Create table views that users can edit
- Let Xcode 4 and Core Data validate your data for you
- Use predicates to precisely select the right data
- Get ready for iCloud features to sync and move data among your iCloud-enabled devices

Category: iOS/Mac Programming
Covers: Core Data User Level: Beginning-to-Intermediate

Learn Machine Learning! Machine learning is one of those topics that can be daunting at first blush. It's not clear where to start, what path someone should take and what APIs to learn in order to get started teaching machines how to learn. This is where Machine Learning by Tutorials comes in! In this book, we'll hold your hand through a number of tutorials, to get you started in the world of machine learning. We'll cover a wide range of popular topics in the field of machine learning, while developing apps that work on iOS devices.

Who This Book Is For This book is for the intermediate iOS developer who already knows the basics of iOS and Swift development, but wants to understand how machine learning works.

Topics covered in Machine Learning by Tutorials

- CoreML: Learn how to add a machine learning model to your iOS apps, and how to use iOS APIs to access it.
- Create ML Tool.
- Turi Create and Keras: Learn how to tune parameters to improve your machine learning model using more advanced tools.
- Image Classification: Learn how to apply machine learning models to predict objects in an image.
- Convolutional Networks: Learn advanced machine learning techniques for predicting objects in an image with Convolutional Neural Networks (CNNs).
- Sequence Classification: Learn how you can use recurrent neural networks (RNNs) to classify motion from an iPhone's motion sensor.
- Text-to-text Transform: Learn how to use machine learning to convert bodies of text between two languages.

By the end of this book, you'll have a firm understanding of what machine learning is, what it can and cannot do, and how you can use machine learning in your next app!

Objective-C is today's fastest growing programming language, at least in part due to the popularity of Apple's Mac, iPhone and iPad. Beginning Objective-C is for you if you have some programming experience, but you're new to the Objective-

C programming language and you want a modern—and fast—way forwards to your own coding projects. Beginning Objective-C offers you a modern programmer's perspective on Objective-C courtesy of two of the best iOS and Mac developers in the field today, and gets you programming to the best of your ability in this important language. It gets you rolling fast into the sound fundamentals and idioms of Objective-C on the Mac and iOS, in order to learn how best to construct your applications and libraries, making the best use of the tools it provides—no matter what projects you plan to build. The book offers thorough introductions to the core tenets of the language itself and its primary toolkits: the Foundation and AppKit frameworks. Within its pages you will encounter a mine of information on many topics, including use of the file system and network APIs, concurrency and multi-core programming, the user interface system architecture, data modeling, and more. You'll soon find yourself building a fairly complex Objective-C based application, and mastering the language ready for your own projects. If you're new to programming altogether, then Apress has other Objective-C books for you such as our Learning and Absolute Beginner titles—otherwise, let your existing skills ramp you fast forwards in Objective-C with Beginning Objective-C so that you can start building your own applications quickly.

Get Started Fast with iOS 7 Core Data App Development Covers iOS 7 and Xcode 5 This is the first Core Data book to fully reflect Apple's latest platform innovations, including its dramatic recent improvements to iCloud support. Hands-on from start to finish, it teaches you step-by-step as you create a modern data-driven iOS app using Storyboards, ARC, iOS 7, and Xcode 5. Tim Roadley introduces new patterns and best practices designed to overcome the frustrations of Core Data development. One step at a time, you'll build and extend your skills—even mastering advanced techniques such as complex model migration, deep copy, background processing, and integration with Dropbox, StackMob, and iCloud. Downloadable versions of this book's main project are provided with each chapter, so you can see exactly what your app project should look like—and get cookbook-style code for your own projects. Chapter exercises help you explore even further, whether you're a self-learner or a student in an iOS development course. If you're an experienced iOS developer, this guide brings together all the skills, tools, code, and patterns you need to add powerful data management capabilities to any app—quickly, easily, and painlessly. Coverage includes the following: Understanding Core Data Adding Core Data to an existing project Designing, upgrading, and migrating data models (automatically and manually with progress indication) Populating views with data, including table-views and picker-views Preloading a "default data" persistent store from XML Deep-copying from one persistent store to another Performance tuning with Instruments, using large photos as the example Background processing, using thumbnail generation as the example Efficient search Seamlessly backing up and restoring with Dropbox Stable integration with iCloud—with full support for multiple accounts, seeding, and de-duplication Web service integration with StackMob

Learn How to Use Swift on the Server! Server Side Swift with Vapor introduces you to the world of server development with the added bonus of using Swift. You'll learn how to build APIs, web sites, databases, application servers and use off site hosting solutions such as Heroku and AWS. You'll use many of Vapor's modules such as Fluent, Vapor's ORM, and Leaf, the templating engine for building web pages. Who This Book Is For This book is for iOS developers who already know the basics of iOS and Swift development and want to transfer that knowledge to writing server based applications. Topics Covered in Server Side Swift with Vapor: - HTTP: Learn the basics of how to make requests to and from servers. - Fluent: Learn how to use Fluent to save and manage your models in databases. - Controllers: Learn how to use controllers to route your requests and responses. - Leaf: Learn how Vapor's Leaf module and its templating language allow you to build dynamic web sites directly. - Middleware: Learn how built-in Vapor modules can assist with common tasks such as validating users, settings required response headers, serving static files and more. One thing you can count on: After reading this book, you'll be prepared to write your own server-side applications using Vapor and, of course, Swift

Get the hands-on experience you need to program for the iPhone and iPod Touch. With this easy-to-follow guide, you'll build several sample applications by learning how to use Xcode tools, the Objective-C programming language, and the core frameworks. Before you know it, you'll not only have the skills to develop your own apps, you'll know how to sail through the process of submitting apps to the iTunes App Store. Whether you're a developer new to Mac programming or an experienced Mac developer ready to tackle the iPhone and iPod Touch, Learning iPhone Programming will give you a head start on building market-ready iPhone apps. Start using Xcode right away, and learn how to work with Interface Builder Take advantage of model-view-controller (MVC) architecture with Objective-C Build a data-entry interface, and learn how to parse and store the data you receive Solve typical problems while building a variety of challenging sample apps Understand the demands and details of App Store and ad hoc distribution Use iPhone's accelerometer, proximity sensor, GPS, digital compass, and camera Integrate your app with iPhone's preference pane, media playback, and more

Ready to build truly stunning apps for iPhone, iPad, and Apple Watch? This cookbook—written exclusively in Swift 3—provides more than 120 proven solutions for tackling the latest features in iOS 10 and watchOS 3. With these code-rich recipes, you'll learn how to build dynamic voice interfaces with Siri and messaging apps with iMessage. You'll also learn how to use interactive maps, multitasking functionality, the UI Testing framework, and many other features. This cookbook is ideal for intermediate and advanced iOS developers looking to work with the newest versions of Apple's mobile operating systems. Each recipe includes reusable code that's available on GitHub, so you can put it to work right away. Let users interact with your apps and services through Siri Write your own

iMessage extensions that allow added interactivity Work with features in Swift 3, Xcode 8, and Interface Builder Build standalone apps for Apple Watch Create vibrant user interfaces with new UIKit features Use Spotlight APIs to make your app content searchable Add Picture in Picture playback functionality to iPad apps Take advantage of MapKit and Core Location updates Use Apple's new UI Testing framework Liven up your UI with gravity and turbulence fields

Core Data is Apple's recommended way to persist data: it's easy to use, built-in, and integrated with iCloud. It's intricate, powerful, and necessary--and this book is your guide to harnessing its power. Learn fundamental Core Data principles such as thread and memory management, discover how to use Core Data in your iPhone, iPad, and OS X projects by using NSPredicate to filter data, and see how to add iCloud to your applications. Cocoa expert Marcus Zarra walks you through developing a full-featured application based around the Core Data APIs. You'll build up a single application throughout the book, learning key Core Data principles such as NSPredicate, thread management, and memory management. Geared toward intermediate to advanced developers, this book gets you comfortable with the basics of Core Data. Then you'll delve deep into the details of the API. You'll explore not only how to get Core Data integrated into your application properly, but even better, how to work with the API's flexibility to create convenience methods to improve your application's maintainability. Learn how to reduce your number of mapping models, integrate your Core Data app with Spotlight and Quick Look, connect your application with sync services, and find out how to use Core Data in a multithreaded environment. By the end of the book, you'll have built a full-featured application, gained a complete understanding of Core Data, and learned how to integrate your application into the iPhone/iPad platform. This second edition updates all examples for OS X Mountain Lion and iOS 6, gets you up to speed on changes in multithreading, and provides new chapters covering iCloud and NSFetchedResultsController.

What You Need Mac OS X Mountain Lion and iOS 6. This book is for intermediate-level iOS developers.

Core Data is intricate, powerful, and necessary. Discover the powerful capabilities integrated into Core Data, and how to use Core Data in your iOS and OS X projects. All examples are current for OS X El Capitan, iOS 9, and the latest release of Core Data. All the code is written in Swift, including numerous examples of how best to integrate Core Data with Apple's newest programming language. Core Data expert Marcus Zarra walks you through a fully developed application based around the Core Data APIs. You'll build on this application throughout the book, learning key Core Data elements such as NSPredicate, NSFetchedResultsController, thread management, and memory management. Start with the basics of Core Data and learn how to use it to develop your application. Then delve deep into the API details. Explore how to get Core Data integrated into your application properly, and work with this flexible API to create convenience methods to improve your application's maintainability. Reduce your migration difficulties, integrate your Core Data app with iCloud and Watch Kit, and use Core Data in a queue-based environment. By the end of the book, you'll have built a full-featured application, gained a complete understanding of Core Data, and learned how to integrate your application into the iPhone/iPad platform. This book is based on Core Data in Objective-C, Third Edition. It

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focuses on Swift and adds an additional chapter on how to integrate Core Data with an efficient network implementation, with best practices on how to load and pre-load data into your Swift application. What You Need: Mac OS X El Capitan and iOS 9 and a basic working knowledge of Swift

Pro iOS Persistence explains how to build apps in Objective-C and Swift that persist and use data most effectively including the popular Core Data framework. Covering common and advanced persistence patterns, this book prepares any iOS developer to store and retrieve data accurately and efficiently. This book starts by giving you a solid grounding in Core Data, providing a foundation for the rest of the book. With this knowledge, you'll have all you need to master Core Data and power your data-driven applications. You'll see how to work with SQLite and how to create an efficient data model to represent your data. Once you've established your data model, you'll learn how to work with data objects and refine result sets to get the most out of the stored data. The advanced portions of the book begin by showing you how to tune your apps' performance and memory usage, to give you a truly professional edge. You'll see how to version and migrate your data as well, to ensure your data stays organized and efficient. Finally, the book covers managing table views with NSFetchedResultsController.

Mastering iOS 14 Programming is the fourth book in the Mastering iOS series, which started back in 2016 with iOS 10. In this latest edition, you'll learn how to build robust iOS apps by harnessing advanced techniques and making the best use of iOS 14's features.

Core Data by Tutorials (Eighth Edition) Persisting iOS App Data with Core Data in Swift
Razeware LLC

Write Truly Great iOS and OS X Code with Objective-C 2.0! Effective Objective-C 2.0 will help you harness all of Objective-C's expressive power to write OS X or iOS code that works superbly well in production environments. Using the concise, scenario-driven style pioneered in Scott Meyers' best-selling Effective C++, Matt Galloway brings together 52 Objective-C best practices, tips, shortcuts, and realistic code examples that are available nowhere else. Through real-world examples, Galloway uncovers little-known Objective-C quirks, pitfalls, and intricacies that powerfully impact code behavior and performance. You'll learn how to choose the most efficient and effective way to accomplish key tasks when multiple options exist, and how to write code that's easier to understand, maintain, and improve. Galloway goes far beyond the core language, helping you integrate and leverage key Foundation framework classes and modern system libraries, such as Grand Central Dispatch. Coverage includes Optimizing interactions and relationships between Objective-C objects Mastering interface and API design: writing classes that feel "right at home" Using protocols and categories to write maintainable, bug-resistant code Avoiding memory leaks that can still occur even with Automatic Reference Counting (ARC) Writing modular, powerful code with Blocks and Grand Central Dispatch Leveraging differences between Objective-C protocols and multiple inheritance in other languages Improving code by more effectively using arrays, dictionaries, and sets Uncovering surprising power in the Cocoa and Cocoa Touch frameworks

Learn Core Data With Swift! Take control of your data in iOS apps using Core Data, through a series of high quality hands-on tutorials. Start with the basics like setting up your own Core Data Stack all the way to advanced topics like migration, performance, multithreading, and more! By the end of this book, you'll have hands-on experience with Core Data and will be ready to use it in your own apps. Who This Book Is For: This book is for intermediate iOS developers who already know the basics of iOS and Swift development but want to learn how to use Core Data to save data in their apps. Topics Covered in Core Data by Tutorials: Your First Core Data App: You'll click File>New Project and write a Core Data app from scratch! NSManagedObject Subclasses: Learn how to create your own subclasses of NSManagedObject - the base data storage class in Core Data. The Core Data Stack: Learn how the main objects in Core Data work together, so you can move from the starter Xcode

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template to your own system. Intermediate Fetching: This chapter covers how to fetch data with Core Data - fetch requests, predicates, sorting and asynchronous fetching. NSFetchedResultsController: Learn how to make Core Data play nicely with table views using NSFetchedResultsController! Versioning and Migration: In this chapter, you'll learn how to migrate your user's data as they upgrade through different versions of your data model. Unit Tests: In this chapter, you'll learn how to set up a test environment for Core Data and see examples of how to test your models. Measuring and Boosting Performance: Learn how to measure your app's performance with various Xcode tools and deal with slow spots in your code. Multiple Managed Object Contexts: Learn how multiple managed object contexts can improve performance and make for cleaner code. Core Data and CloudKit: Learn how to synchronize Core Data across all of a user's devices.

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