

iOS App Development

Swift & SwiftUI Programming



5 Days Training + 5 Days Workshop

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5 Days Training - Advanced iOS App Development

	Topics	40 Hours
Day 1	UI Foundations & Communication Patterns	8
Day 2	Advanced Swift & Architecture	8
Day 3	Networking, Persistence & Security	8
Day 4	Concurrency & System Services	8
Day 5	Testing, Performance & Advanced Features	8

5 Days Workshop - End-to-End Development & AppStore Deployment

	Topics	40 Hours
Day 6	App Foundations with Firebase	8
Day 7	Data & Real-Time Features	8
Day 8	BLE, WiFi & IoT / HomeKit Integration	8
Day 9	Payments & Monetisation	8
Day 10	App Store Deployment	8

Day 1 - UI Foundations & Communication Patterns

	Topics	8 Hours
1	Auto Layout : Constraints, priority, hugging, resistance	2
2	Programmatic UI : UIKit & SwiftUI layout setup	1.5
3	Custom Views : Subclassing UIView, reusable SwiftUI Views	1
4	Animations : UIView.animate & CoreAnimation basics	1
5	Delegation Pattern : Protocols, examples	1.5
6	NotificationCenter : Event broadcasting & observers	1

Day 2 - Advanced Swift & Architecture

	Topics	8 Hours
1	Closures - Capturing values, escaping, trailing syntax	1.5
2	Design Patterns - MVC, MVP, MVVM, VIPER, Singleton	1.5
3	MVVM Practical example	2
4	Clean Architecture - Layers, Separation, Use Case, Interface Adapters, Entities	1
5	Coordinator Pattern - Navigation logic separation	1
6	Dependency Management (SwiftPM, CocoaPods)	1

Day 3 - Networking, Persistence & Security

	Topics	8 Hours
1	Networking with URLSession, JSON & Codable	2
2	Persistence: UserDefaults, FileManager	1
3	CoreData & SwiftData (Relationships, Fetched Results)	2
4	Security: Keychain storage, FaceID/TouchID	1.5
5	SSL Pinning & Secure Networking	1.5

Day 4 - Concurrency & System Services

	Topics	8 Hours
1	GCD - Queues, DispatchGroup, Barriers	1.5
2	Swift Concurrency - async / await, Actor, Structured concurrency	2
3	App Lifecycle - AppDelegate, SceneDelegate, Restoration	1
4	Background Tasks (BGTaskScheduler)	1
5	CoreLocation - Location Accuracy, Geofencing	1.5
6	CoreBluetooth - BLE discovery & connection	1

Day 5 - Testing, Performance & Advanced Features

	Topics	8 Hours
1	Unit Testing with XCTest & Mocking	1.5
2	UI Testing with XCUITest	1
3	Memory Management: ARC, Retain Cycles, Leaks	1.5
4	Instruments: Leaks, Time Profiler, Allocations	1.5
5	Widgets with WidgetKit	1.5
6	App Tracking Transparency (ATT), IDFA, Requesting user consent	1

Day 6 - App Foundations with Firebase

	Topics	8 Hours
1	Firestore integration & Authentication	2
2	Practical Exmample - Phone OTP / Google Signin	3
3	Firestore Schema, CRUD Practical Examples - Create, Read, Update, and Delete	3

Day 7 - Data & Real-Time Features

	Topics	8 Hours
1	Firestore advanced queries, indexing	2
2	Firestore offline persistence	1
3	Firebase Storage: Images & files	2
4	Push Notifications with FCM	2
5	State management with ObservableObject / EnvironmentObject	1

Day 8 - BLE, WiFi & IoT Integration

	Topics	8 Hours
1	CoreBluetooth Scanning & Connecting	2
2	BLE device data exchange	2
3	WiFi Communication Basics, Sockets	1.5
4	Real-time Firebase sync with BLE / WiFi data	2.5

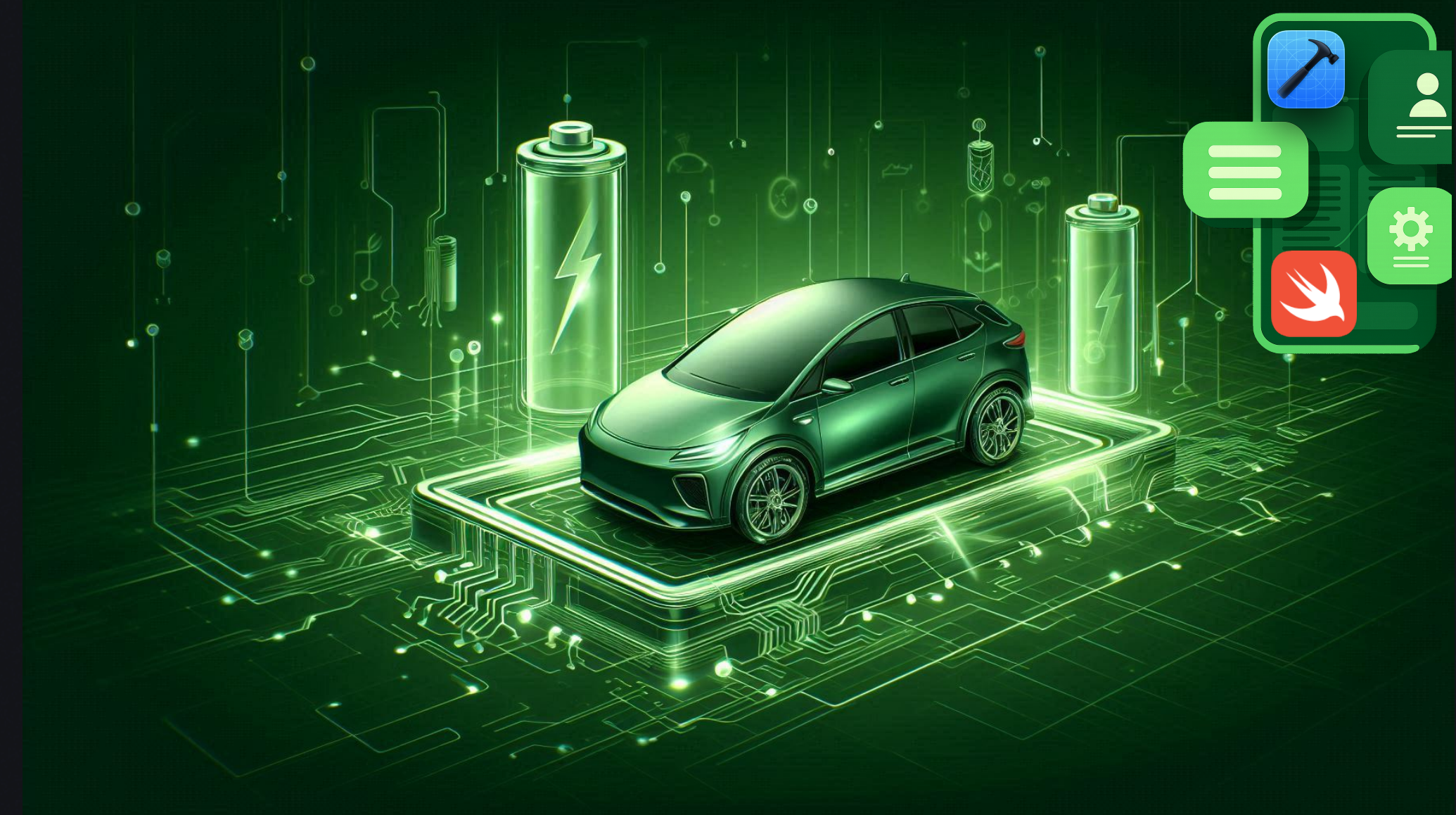
Day 9 - Payments & Monetisation

	Topics	8 Hours
1	In-App Purchases setup & StoreKit 2 APIs	3
2	Payment Gateway (Stripe/Razorpay) integration	3
3	Purchase Validation & Receipt Handling	1
4	Subscription vs One-Time model	1

Day 10 - App Store Deployment

	Topics	8 Hours
1	App Store Connect & provisioning setup	2
2	App icon, launch screen, localization	1
3	Privacy policy, ATT, GDPR compliance	1.5
4	TestFlight distribution	1.5
5	Final App Store submission checklist	2

Please share feedback and suggestions..



Thank you

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