Sarath Sasi

Senior Software Engineer | iOS Tech Lead | Mobile Application Development (iOS and Android)

Doha, Qatar | +974 5038 1132 | sarathspkum@gmail.com
LinkedIn: linkedin.com/in/sarath-sasi-ios | GitHub: github.com/sarathdev | Stack Overflow: stackoverflow.com/users/4264233/sarath-sasi

PROFESSIONAL SUMMARY

Senior software engineer and iOS tech lead with deep roots in banking and payments. Built card management for credit union cardholders, Apple Pay card provisioning, payment features in a consumer fintech e-wallet, and a Worldpay-certified point-of-sale SDK driving EMV and NFC terminals over Bluetooth.

Now leads secure mobile and platform work for a government organisation in Qatar: a Signal-based messaging app, an in-house MDM, and multi-tenant Go platforms with OAuth2 and OIDC. Native iOS is the depth, in Swift, SwiftUI, UIKit and Objective-C, with Android in Kotlin and Jetpack Compose and Go on the backend.

Domains: Banking, fintech and payments, Government and secure communications, Enterprise retail and field service, Automotive

TECHNICAL SKILLS

iOS: Swift, Objective-C, SwiftUI, UIKit, Combine, RxSwift, Auto Layout, Storyboards

Banking and payments: Apple Pay card provisioning (PassKit), card management, digital wallets, e-wallet payments, card-present payments, secure payment flows, Worldpay certification, EMV, NFC, Ingenico terminals over BLE

Apple frameworks: Core Data, Core Location, MapKit, Core Bluetooth, AVFoundation, User Notifications, Foundation

Architecture: Clean Architecture, MVVM, MVVMC, MVC, Coordinator, Protocol-Oriented Programming, SOLID, modular architecture, XCFrameworks, dynamic frameworks

Security and identity: Signal Protocol, Keychain, encryption, OAuth2, OIDC, PKCE, JWT/JWKS, RBAC, Keycloak, OpenFGA, vulnerability assessment

Enterprise mobility: Mobile Device Management (MDM), NanoMDM, Apple Developer Enterprise Program, Apple Business Manager, enterprise and ad hoc distribution

Backend and platform: Go, Chi, Echo, PostgreSQL, pgx, Redis, REST, OpenAPI, JSONB, microservices, multi-tenant architecture

Real-time: WebRTC, LiveKit, push-to-talk (PTT), QUIC/WebTransport, WebSocket, NATS JetStream, RabbitMQ, Opus, Protobuf

Android and cross-platform: Kotlin, Jetpack Compose, Xamarin with MvvmCross, native plugins for Ionic Cordova

Web: SvelteKit, Svelte, TypeScript, Angular, Tailwind CSS

Quality and delivery: XCTest, unit and UI testing, TDD, SwiftLint, code review, CI/CD, Agile, GitHub Actions, Jenkins, Fastlane, TestFlight, App Store Connect

Infrastructure: Docker, Kubernetes, Helm, ArgoCD, Nginx, OpenTelemetry, Prometheus, Grafana

Tooling: Xcode, Git, GitLab, Bitbucket, SVN, CocoaPods, Swift Package Manager, Alamofire, JIRA, Confluence, Rally

PROFESSIONAL EXPERIENCE

Senior Software Engineer / iOS Tech Lead

Government Organization, Qatar | May 2025 – Present

Leads architecture and delivery across secure mobile apps, enterprise platforms, real-time communications and multi-tenant systems.

Secure mobile

- Led architecture and delivery of a high-security enterprise messaging app based on a Signal fork, covering mobile architecture, enterprise distribution, security and system integrations.
- Designed a privacy-focused, username-based authentication model integrated with organisational administration systems.
- Pioneered an in-house MDM on NanoMDM for device policy enforcement, reducing dependence on third-party MDM platforms.

- Advised security and IT teams on adopting the Apple Developer Enterprise Program, enterprise distribution, compliance and Apple Business Manager.
- Co-developed a native Android push-to-talk proof of concept in Kotlin, Jetpack Compose and LiveKit/WebRTC: group and private channels, membership, recording playback and battery-conscious signalling.

Platform architecture

- Audited an 8-component Go, Android and Angular field-operations platform, analysing 100+ API endpoints, authentication flows, real-time pipelines and dependencies.
- Produced a security and technical-debt register of 24 architectural and security issues across authentication, credential handling, session management and test coverage.
- Designed the next-generation field-operations and push-to-talk platform, evaluating LiveKit vs Mumble, NATS vs RabbitMQ and SeaweedFS vs MinIO.
- Architected a migration from a TCP message-broker voice pipeline to a WebRTC SFU on LiveKit, with QUIC/WebTransport and WebSocket fallback.
- Specified floor control, multi-channel PTT, priority interruption, secure sessions and voice recording, and consolidated several backend services into one platform.

Multi-tenant control plane

- Designed isolated tenant stacks under a central control plane that manages policy and metadata with no access to tenant business data.
- Built the control plane in Go, Chi, PostgreSQL, pgx, SvelteKit, TypeScript and Tailwind CSS.
- Implemented tenant lifecycle, validated JSONB configuration, feature flags, branding, and manual and bulk CSV user staging.
- Built a slug-scoped tenant pull API, so isolated tenants fetch staged users without the control plane reaching into their networks.
- Implemented OAuth2/OIDC Authorization Code with PKCE, RS256 JWT validation through JWKS, HttpOnly secure cookies, silent token refresh and fail-closed RBAC.
- Shipped an English and Arabic operations console with full RTL, packaged with the Go API and migrations as a single binary.
- Packaged the stack with PostgreSQL, nginx TLS, identity provider integration and Docker, with runbooks, health and readiness monitoring, and handover documentation.

Lead iOS Engineer

ThoughtFocus | Nov 2023 – Mar 2025

Led payments engineering across a card-present point-of-sale SDK and a consumer e-wallet app.

Point-of-sale payments SDK (Deluxe)

- Architected the Deluxe POS SDK with XCFrameworks and dynamic frameworks, achieving 100% Worldpay certification compliance.
- Integrated the Ingenico Moby5500 terminal over BLE, with secure EMV chip and NFC tap transaction flows.
- Maintained a modular SDK architecture that sped up feature delivery and third-party integrations.

Consumer e-wallet payments

- Developed and enhanced features in a payment module of a consumer fintech e-wallet app, and resolved defects in payment flows with the QA team.
- Wrote XCTest unit tests, followed SwiftLint standards, and took part in code reviews and security checks on payment code.
- Contributed to refactoring legacy payment code toward a modular architecture.

Apps and team

- Optimised live iOS apps including AskTeddy and iTuffy, improving UI responsiveness by 25% and reducing crash rates.
- Mentored junior engineers and introduced engineering practices that cut production defects by 40%.
- Worked with QA, backend and business teams to define requirements and raise release quality.

Senior Engineer, Mobility

Concentrix Catalyst | Oct 2021 – Apr 2023

T-Mobile, Upgrade Module — enterprise iPad app used by mobile experts in T-Mobile retail stores for in-store operations.

- Created and structured new modules, then designed, built, tested and delivered them in the enterprise iPad app.
- Built on MVVMC and Combine, with asynchronous reactive workflows and REST API integration.
- Championed strict code reviews and vulnerability assessments; wrote unit tests with XCTest and enforced SwiftLint.
- Refactored unmaintained modules into a modular architecture, separating UI, business logic and service layers.
- Raised release quality with QA through unit and UI test suites wired into CI/CD.
- Reviewed wireframes and designs for technical viability, and delivered pixel-perfect, responsive interfaces with the UI/UX team.
- Contributed RFCs and documentation for the codebase and packages.
- Mentored junior engineers and supported their onboarding.

Environment: Xcode, GitLab, SourceTree, JIRA, Confluence, CocoaPods

Senior iOS Application Developer

Accenture | Apr 2019 – Oct 2021

PSCU, DX Mobile (banking) | Aug 2019 – Jul 2021 — card management app for credit union cardholders: account balance, alerts and controls, and turning a card on or off, all in one app.

- Built the native Apple Pay card provisioning plugin in Swift for the Ionic Cordova app, using Plugman, so cardholders could add cards to Apple Wallet.
- Created and maintained native plugins in Swift and Objective-C.
- Resolved iOS build and environment bottlenecks, and significantly improved build performance by upgrading and optimising the code.
- Worked directly with the client on requirements, solution design and Agile sprint delivery.

Comcast, Tech360 — enterprise app that field technicians use to review customer requirements before visiting a service location.

- Delivered user stories for new features, bug fixes and UI enhancements.
- Refactored the codebase from MVC to MVVM.
- Implemented backend integration with Alamofire.
- Integrated the app with enterprise systems, third-party APIs and internal platforms.

Environment: Xcode, VS Code, Git, GitHub, SourceTree, JIRA, Rally

iOS Application Developer

Spurtree Technologies | Mar 2015 – Apr 2019

- Designed architecture, built and shipped iOS apps end to end, from concept through App Store release.
- Ran scheduled client calls on requirements and owned end-to-end project delivery in Agile cycles.
- Worked with BLE, UART, analogue signals and network protocols against real automotive hardware.

Shipped apps

- **BMW Sales Essentials (BMW India)** — sales tool covering the BMW brand, sales processes, detailed product information and technology upgrades.
- **This For That** — India's first online women's fashion swapping platform, for exchanging bags, clothes and shoes.
- **BSM Universal** — fleet management: vehicle checkout, inspections, and driver and vehicle tracking over TCP/IP. Built with Xamarin and MvvmCross to share logic across platforms.
- **SIMS** — field survey app for inspecting industrial sites and fuel stations and reporting to authorities. Xamarin with MvvmCross.
- **iON CID** — shopping mall management app; integrated in-app chat using the Layer SDK.

Environment: Xcode, Xamarin Studio, Zeplin, JIRA, Git, SVN, Bitbucket, SourceTree

EDUCATION

- **Master of Computer Applications (MCA)** — AMC Engineering College, Visvesvaraya Technological University, Bangalore | 2014
- **BSc Computer Science** — Christ College, Kerala | 2011