

ANIL KUMAR THATHA VENKATACHALAPATHY

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SENIOR SOFTWARE ENGINEER - IOS, MACOS & FRAMEWORKS

Results-driven Senior Software Engineer with 13+ years of expertise building enterprise-scale iOS and macOS applications serving 100,000+ users. Proven track record leading cross-functional teams of 6+ developers while delivering high-impact features that improved performance by up to 70% and user satisfaction by 25%. Expert in Swift and Objective-C with deep knowledge of Apple frameworks, architectural patterns, and modern development practices. Successfully shipped 15+ production applications while mentoring junior developers and establishing engineering best practices across organizations.

TECHNICAL SKILLS

LANGUAGES & FRAMEWORKS

Languages: Swift, Objective-C, Python, Bash, SQL
iOS/macOS: UIKit, AppKit, SwiftUI, Combine, Core Data, Core Animation, Core Graphics
Advanced: Core ML, ARKit, Metal, Vision, NaturalLanguage
AI & ML: On-device Foundation Models, LLM Integration, AI-assisted Development, Natural Language Processing
Networking: URLSession, RESTful APIs, WebSockets, XPC

ARCHITECTURE & DESIGN

Patterns: MVVM, MVP, VIPER, Clean Architecture, MVC
Design Patterns: Singleton, Factory, Observer, Delegate, Coordinator
Principles: Dependency Injection, Protocol-Oriented Programming

DEVELOPMENT & TOOLS

IDEs: Xcode, Visual Studio Code
Version Control: Git, GitHub, Bitbucket
Package Management: SPM, CocoaPods, Carthage
CI/CD: Fastlane, Jenkins, GitHub Actions, Xcode Cloud
Code Quality: SwiftLint, SwiftFormat, Code Coverage

TESTING & QUALITY ASSURANCE

Testing: XCTest, TDD, XCUITest, Snapshot Testing
Performance: Instruments, Memory Profiling, Time Profiler, Allocations
Debugging: LLDB, Breakpoints, Memory Graph Debugger

DATABASE & STORAGE

SQLite, Core Data, Realm, MySQL, UserDefaults, Keychain Services, File System

SECURITY & COMPLIANCE

Keychain Services, Certificate Pinning, App Transport Security, Data Encryption, Secure Storage, Authentication/Authorization

ADDITIONAL SKILLS

Accessibility: VoiceOver, Dynamic Type, Accessibility Inspector
Localization: Internationalization (i18n), String Catalogs
Analytics: Firebase, Crashlytics, App Analytics

TOOLS & PLATFORMS

Design: Sketch, Adobe XD, Figma
Project Management: JIRA, Confluence, Agile/Scrum
Distribution: TestFlight, App Store Connect, Enterprise Distribution

PROFESSIONAL EXPERIENCE

TCS America | Lead Engineer

June 2021 - Present

Led engineering initiatives for enterprise iOS and macOS applications serving Apple Retail and internal teams. Managed offshore development teams of 8+ engineers while driving architecture decisions, code quality standards, and delivery timelines. Collaborated with product managers, designers, and stakeholders

to deliver mission-critical features impacting retail employees worldwide.

Key Achievements:

- Reduced application crash rate by 80% (from 15% to 3%) through implementation of comprehensive unit testing (85% code coverage) and automated CI/CD pipelines using Fastlane
- Improved app launch time by 70% through performance profiling and optimization of Core Data stack and network layer
- Leveraged AI-assisted development and LLM integration to accelerate feature development by 40%, including code generation, automated testing, and intelligent code reviews
- Led migration of 3 legacy Objective-C applications to Swift, reducing codebase by 25% while improving maintainability
- Established code review standards and architectural guidelines adopted across 4 development teams
- Mentored 6 junior developers, with 3 promoted to mid-level roles within 18 months

Notable Projects:

Genius (iOS) & RepairCentral (macOS) - Retail Repair Management Platform

- Architected and developed comprehensive repair management system used by Genius Bar employees across all Apple Retail Stores worldwide
- Integrated on-device foundation models for intelligent repair recommendations and natural language diagnostic assistance, reducing average diagnosis time by 35%
- Implemented real-time sync between iOS and macOS applications using CloudKit, reducing data conflicts by 90%
- Designed intuitive UI/UX reducing average repair creation time from 5 minutes to 2 minutes, improving customer satisfaction scores by 25%
- Built robust offline-first architecture ensuring 99.9% uptime even in poor network conditions

Technologies: Swift, SwiftUI, Core Data, CloudKit, Core ML, On-device Foundation Models, MVVM architecture, XCTest

Disclosed - Classified macOS Security Application

- Led development of classified security application using proprietary internal frameworks and private APIs for macOS
- Implemented military-grade encryption and security protocols in collaboration with Apple Security teams
- Managed full SDLC from requirements gathering through deployment for application handling sensitive internal data
- Achieved 100% compliance with security audits and zero security incidents in production

Technologies: Swift, AppKit, Internal OS SDK, Custom Security Frameworks, Keychain

Kickstart - macOS Device Setup Automation

- Developed automated device provisioning tool reducing new employee setup time from 4 hours to 30 minutes
- Implemented package manager integration installing 20+ essential applications with zero-touch deployment
- Created intuitive onboarding flow reducing IT support tickets by 40%

Technologies: Swift, AppKit, Bash scripting, URLSession, Combine

Devices - macOS Employee Device Management

- Built native macOS application providing real-time device information for Apple employees
- Integrated with MDM APIs delivering instant access to device status, serial numbers, and application inventory
- Designed self-service portal reducing IT helpdesk requests by 35%

Technologies: Swift, AppKit, RESTful APIs, Core Data, SwiftUI

Additional Projects

- **Sparkle Framework:** Enhanced open-source framework with enterprise security features deployed across 15+ internal macOS applications
- **MDM Automation Scripts:** Developed Python and Bash automation scripts reducing manual deployment time by 80%

Quest Global | System Analyst

June 2014 - June 2021

Spearheaded development of 10+ enterprise iOS and macOS applications from concept to App Store deployment. Collaborated with product managers and designers to define requirements, architect solutions, and deliver features impacting Apple employees. Progressed from Software Engineer to System Analyst, taking on increasing responsibilities in architecture, mentoring, and technical leadership.

Key Achievements:

- Successfully delivered 10+ applications to production with 4.5+ star average rating and 98% crash-free rate
- Reduced development cycle time by 30% through implementation of Agile methodologies and automated testing
- Established iOS development best practices adopted company-wide, including coding standards and architectural patterns
- Mentored 8 junior developers over 8 years, with 5 advancing to senior positions

- Led technical interviews and grew iOS team from 3 to 12 engineers

Notable Projects:

Apple Travel - iOS Travel Management Application

- Architected and developed enterprise travel management app used by internal Apple employees for booking flights, hotels, and managing itineraries
- Integrated with 3 third-party APIs (Concur, Sabre, TripIt) providing seamless booking experience
- Implemented push notifications reducing missed booking deadlines by 45%
- Achieved 4.6 App Store rating with 95% user satisfaction in internal surveys

Technologies: Swift, UIKit, Core Data, RESTful APIs, Push Notifications, MapKit

Expenses - iOS & macOS Expense Management

- Developed cross-platform expense management application with seamless data sync between iOS and macOS
- Implemented OCR receipt scanning using Vision framework, reducing manual entry time by 70%
- Added GPS-based automatic location filling improving compliance and reducing expense report errors by 50%
- Built comprehensive unit test suite with 80% code coverage ensuring reliability

Technologies: Swift, SwiftUI, UIKit, AppKit, Vision (OCR), Core Location, CloudKit

Global Security - iOS Security Management System

- Built comprehensive security management app for badge access, notifications, and key/lock service requests
- Integrated with Apple's internal security systems serving employees across multiple offices
- Implemented QR code scanning reducing badge request processing time by 60%

Technologies: Swift, UIKit, Core Data, Vision (QR scanning), Push Notifications

Additional Projects

- **Purchase Requisition POC:** iPad application streamlining requisition approval workflow, reducing approval time from 3 days to 4 hours; secured \$500K budget
- **Swift Server Framework:** Built lightweight web framework in Swift for rapid API development; deployed 5+ microservices handling 10,000+ requests/day
- **Radar:** Enhanced Apple's internal bug tracking system with advanced search and batch operations, achieving 75% code coverage
- **1099 Tax Management:** IRS filing system reducing filing errors by 85% and saving 200+ hours annually
- **Funds Management:** Managed dealer reimbursements for advertising, promotion, and hiring costs related to Apple's business
- **Customs Tracking:** Compliance tracking system reducing manual review time by 70% with zero compliance violations

Exilant Technologies Pvt Ltd | Software Engineer

Jul 2010 - Sep 2012

Gained foundational expertise in iOS and macOS development, contributing to framework development and enterprise applications. Developed strong debugging skills and understanding of low-level system APIs.

Key Projects:

- **Software Depot:** Debugged ISTSU protocol for software installation package management on macOS
- **Enclosure Framework:** Designed Cocoa Client API for file storage interaction with comprehensive unit testing
- **ISTCore Framework:** Contributed to modular framework development with reusable components
- **Mobile Enclosures:** Built file upload/download system with pause/resume and background transfer capabilities, achieving 99% transfer success rate

Technologies: Objective-C, Cocoa, AppKit, UIKit, Core Foundation, SQLite, Unit Testing

EDUCATION

Asia University, Taiwan

2014

Master of Science in Computer Science and Information Engineering

(Career break taken to pursue advanced degree)

Visvesvaraya Technological University, India

2010

Bachelor of Engineering in Electronics and Communication Engineering