

Pavel Kanzelsberger

Principal Software Engineer

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Banska Bystrica,
Slovakia

Principal Software Engineer with over 10 years building native applications for Apple platforms. Core expertise in iOS and macOS development using Swift and Objective-C, with deep specialization in cryptography, passwordless authentication (FIDO2, WebAuthn), and secure system architecture. At HYPR, extending enterprise passkey infrastructure to secure AI agents and Model Context Protocol (MCP) servers, plus NFC-based identity verification and macOS Endpoint Security work. Participating member of the FIDO Alliance Technical Working Group. Previously built the passwordless authentication SDK at Beyond Identity, and led mobile platform architecture at Quintiles IMS (IQVIA) and Johnson Controls across the US and EU. Beyond client work, runs Mediaware — a software company delivering end-to-end solutions including server-side Swift (Vapor), Vue.js/TypeScript frontends, PostgreSQL, Redis, Docker, Linux server administration, and CI/CD pipelines.

EXPERIENCE

Principal Software Engineer

May 2026 — Present

HYPR, New York

Extending HYPR's passwordless platform to secure AI agents and Model Context Protocol (MCP) servers — bringing cryptographic identity, phishing-resistant authentication, and attestation to autonomous AI systems and agentic workflows. NFC-based identity verification on iPhone using BAC and PACE protocols to read ePassports and eIDs. On macOS, building System Extensions and leveraging the Endpoint Security framework for secure, privileged operations outside the app sandbox. Continuing member of the FIDO Alliance Technical Working Group and FIDO2 non-CTAP Subgroup.

iOS macOS Swift AI Agent Security MCP NFC (BAC/PACE) System Extensions Endpoint Security Cryptography Technical Leadership

Senior Software Engineer

Oct 2024 — Apr 2026

HYPR, New York

SDK and iOS app development, refactoring architecture, migrating from Objective-C to modern Swift. Working with FIDO2, WebAuthn, NIST elliptic curve DSA keys, and Trusted Execution Environments. Implemented Enterprise Passkeys (device-bound and multi-device), Credential Provider support, GPG/SSH commit signing, and SSH authentication using Passkeys.

iOS macOS Swift Objective-C FIDO2 WebAuthn Cryptography CI/CD

Senior Software Engineer

Apr 2021 — Sep 2024

Beyond Identity, New York

Built the strongest passwordless authentication SDK. Responsible for iOS and macOS development. Functional programming, composable architecture, reducers, Swift and Rust.

iOS macOS Swift Rust Cryptography CI/CD

Enterprise Mobility Architect & iOS/Android Developer

Jan 2015 — Aug 2020

Johnson Controls, Milwaukee

Managed mobile app development, deployment, and MDM (MobileIron, Intune). Built a service for mobile app deployment through MDM internal AppStore — backend in Vapor, frontend in AngularJS (later Vue.js). Developed services for iOS app code resigning and publishing through MDM with internal certificates, including bitcode recompilation.

iOS macOS Swift Vapor Vue.js MDM Code Resigning

Associate Director of Information Technology

Nov 2016 — Sep 2017

Quintiles IMS (now IQVIA), Durham, North Carolina

Coordinated mobile platform architecture, implementation and strategy. Mentored team of internal and contracted developers, UX designers, cloud and database architects. Lead Software Engineer at Mobile Centre of Excellence.

iOS Swift Objective-C ResearchKit

Lead Software Engineer

May 2015 — Nov 2016

Quintiles, Durham, North Carolina

Mobile app development with Swift and Objective-C. RedHat FeedHenry mobile cloud platform integration, Node.js, Oracle. Active contributor to Apple's open-source ResearchKit framework.

iOS Swift Objective-C ResearchKit FeedHenry

SKILLS

Swift, Objective-C, C

iOS, macOS, tvOS, watchOS

Cryptography, FIDO2, WebAuthn

Composable Architecture, FP

Vapor, Vue.js, TypeScript

PostgreSQL, Redis, Docker

PROJECTS

Titanium Passkey

Offline FIDO2 / WebAuthn credential provider for iPhone, iPad, and Mac. Secure Enclave storage, biometric gating.

AppRanks.app

App Store rankings tracker across 40+ countries. Vue.js frontend, Swift Vapor backend, PostgreSQL. Self-hosted.

RSA Framework for VW/Audi

Drop-in iOS framework for transparent network request and data verification using digital signatures.

iAttend Porter

Employee presence tracking with iPad-connected biometric device for fingerprint authentication.

HomeBe-at

Home Assistant client for macOS and Apple TV. WebRTC camera streaming, smart detection alerts. SwiftUI.

Passeporté

NFC passport and eID reader for iPhone. Biometric encryption, PACE/BAC protocols. On the App Store.

SecureChat

iMessage/Signal alternative with anonymous users, E2E encryption, and physical key verification. iOS + Vapor backend.

EDUCATION

Geographical Information Systems

Matej Bel University, Slovakia

LANGUAGES

Slovak Native

English Professional

INTERESTS

Tennis

Beach Volleyball

Cars

3D Printing