

# Pavel Kanzelsberger

## Senior Software Engineer

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Banska Bystrica,  
Slovakia

Experienced 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. Currently working on enterprise passkey infrastructure at HYPR as a 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

### Senior Software Engineer

Oct 2024 — Present

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. Participating member of FIDO2 Technical Working Group and FIDO2 non-CTAP Subgroup.

iOS macOS Swift Objective-C FIDO2 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

### Passeporte

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

### HomeBeat

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

### **AppRanks**

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

### **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

### **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.

### **INTERESTS**

Tennis

Beach Volleyball

Cars

3D Printing