# Mihaela Mihaljević Jakić

**Independent Swift and Apple-platform consultant | Architecture, SwiftUI, OpenAPI, MCP**

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## SUMMARY

Independent Swift engineer, on Apple platforms since 2013. I build developer tooling for teams that use coding agents: MCP servers in Swift, documentation retrieval measured with a fixed query set and paired statistics, and engineering rules enforced by hooks and CI. I also modernise UIKit and SwiftUI codebases, diagnose SwiftUI rendering, and run migrations verified against a reference. Author of Cupertino, an open-source MCP server for 391,056 pages of Apple documentation. In 2026 I spoke at Do iOS, swiftCon Berlin and iOSKonf.

**Available:** consulting and contract work through CodeWeaver j.d.o.o., remote, EU/EEA. **Languages:** Croatian (native), English (fluent), German (intermediate).

## SELECTED WORK

- **Cupertino** (codeberg.org/CupertinoHQ/cupertino): open-source MCP server in Swift. Version 1.5.0 indexes 391,056 pages of Apple documentation across 424 frameworks. Featured in iOS Dev Weekly.
- **SwiftUI Is One Graph** (youtu.be/7NgOe1hf5S4): talk at swiftCon Berlin 2026. I rebuilt SwiftUI's semantics in pure Swift and held the result against the real framework in 125 differential tests.
- **XRay Viewer** (aleahim.com/apps/xray): Mac app in public beta, signed and notarized. It shows the real Core Animation layers of a running app.
- **OneGraph** (aleahim.com/apps/onegraph): Mac app in beta, signed and notarized. It shows which parts of a SwiftUI view's graph ran again and why.
- **OpenAPIDoctor** (codeberg.org/OpenAPIHQ/OpenAPIDoctor): command-line tool that diagnoses and repairs OpenAPI specifications, tested on 594 YAML files from 22 services.
- **Writing and publishing** (aleahim.com/blog): TileDown, my static-site engine in Swift, builds the site. MarkdownPDF, my Markdown-to-PDF engine in Swift, typesets this CV.

## EXPERIENCE

### Founder and independent consultant, CodeWeaver j.d.o.o.

May 2024 - Present | Zagreb, remote

Consulting and contract engineering for Swift on Apple platforms: architecture reviews, code audits, SwiftUI diagnosis, OpenAPI contracts, MCP servers in Swift, workshops and talks. Client engagements:

- **EU firm, identity documents (Sep 2025 - Present, confidential):** senior iOS architect for security-critical apps that capture, personalise and verify identity documents. I structure the apps as 20+ Swift packages, each with a single responsibility, in a unidirectional dependency graph, and integrate the backend from OpenAPI specifications through generated, type-safe Swift code.
- **EU enterprise client (under NDA, 2024 - 2025):** reorganised the backend OpenAPI specifications so that endpoints and models are consistent, built a modular Swift networking package for reuse across projects, and wired Swift OpenAPI Generator into CI so that client code cannot drift from the contract.
- **Everliv AI Fitness Chat (2024 - 2025):** wrote the OpenAPI specification for the REST endpoints and the Server-Sent Events chat stream, a mock Vapor server for development and testing, a custom SSE client on async/await, and SwiftUI clients for macOS and iOS built from shared components.

**Technologies:** Swift, SwiftUI, UIKit, SwiftPM, structured concurrency, OpenAPI, Vapor, Server-Sent Events

### Senior iOS Developer, iOLAP

Nov 2022 - Mar 2025 | parallel engagement, overlaps CodeWeaver from May 2024

- **Zumiez Stash** (retail loyalty app): wrote a generator of the Swift network client from OpenAPI specifications, a dependency-free GraphQL client with typed requests and a modular filtering system.
- **AI Chat SDK** (iOS and macOS): built from 10+ local Swift packages (UI styling, messages, sockets, speech recognition), with reactive UI on Combine and protocols shared by both platforms.
- **iRobot app:** added onboarding features and automated the localisation.

**Technologies:** Swift, SwiftUI, UIKit, AppKit, Combine, REST, OpenAPI, GraphQL, WebSockets, SwiftPM

### Senior iOS Developer, Cherishing Studio

Jul 2019 - Oct 2022

- **Wheels Up:** moved an Objective-C codebase to Swift, simplified the login flow and built custom UIKit components.
- **Birch Finance:** refactored the UI and networking layer of a large fintech app to MVVM in feature modules, and wrote its networking library with full test coverage.
- **Budtz Innovation:** led the refactoring of an iOS app's UI and networking stack into feature modules.

**Technologies:** Swift, Objective-C, UIKit, REST, OpenAPI, MVVM, Core Animation

### iOS Developer, agency contracts

2013 - 2019 | parallel contracts

Contract work for the agencies Token, Purch, Masinerija and Undabot, including ShopSavvy barcode scanning, QR Code Reader and Scanner, an ARKit integration and an iPad book app with custom Core Text layouts.

## TALKS

- **Do iOS 2026** (NEMO Science Museum, Amsterdam, Nov 2026): "SwiftUI Is One Graph"
- **swiftCon Berlin 2026** (City Cube Berlin, Oct 2026): "SwiftUI Is One Graph: Reverse Engineering Apple's UI Engine" (recording above), and the Friday keynote panel "We Have the Tech, Now What? Foundation Models, Siri, and the Reality of Enterprise AI"
- **iOSKonf26** (Skopje, May 2026): "Teaching AI to Read Apple Docs: Building Cupertino, an MCP Server in Swift" (recording)
- **Swift Academy Podcast** (Apr 2026): "Discover Cupertino MCP", 43 minutes (recording)
- **NSSpain XIII** (Logroño, Sep 2025): "API-Driven Development Refactored: Scaling Server and Client Code", 33 minutes (recording)

## WRITING

- SwiftUI Is One Graph, Over 40+ Years of Engineering (Jun 2026)
- The SwiftUI Oracle: Measuring a Clean Room Against the Real Thing (Jun 2026)
- Cupertino 1.5.0: Five Months of Apple Documentation, Diffed (Nov 2026)
- Book in progress: *Extreme Packaging*, on modular Swift architecture

## SKILLS

- **Swift:** Swift 6 with strict concurrency, structured concurrency, actors, Swift Package Manager, Swift Testing, XCTest; Objective-C as a migration source
- **Apple UI:** SwiftUI (attribute graph, layout, animation), UIKit, AppKit, Core Animation, Core Graphics, Core Text
- **API and server:** OpenAPI, Swift OpenAPI Generator, Vapor, REST, GraphQL, SSE, WebSockets
- **AI tooling:** MCP servers and clients in Swift, documentation indexing and search, engineering rules for coding assistants
- **Platforms:** iOS, iPadOS, macOS; Swift on Linux and in the browser
- **Domains:** identity documents, fintech, retail

## EDUCATION

**M.Sc., Information and Speech Science**, Faculty of Humanities and Social Sciences, University of Zagreb