Filip Grebenac

Senior Software Engineer - Android, iOS, Rust, AI

Croatia (CET) · EU citizen · remote · 20–25 h/week · on-site visits 1–2× per year

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Business: PhoenixByte, phoenixbyte.hr

Profile

Senior mobile engineer with 8 years of native Android (Kotlin), native iOS (Swift, SwiftUI) and 5 years of Rust. I build long-lived apps end to end, from architecture to store release, together with the backend, web and AI-agent parts around them. I work AI-first with Claude Code, backed by tests and code review, so features ship fast without losing quality. Used to distributed EU teams.

Core skills

- **Android:** Kotlin, Java, Jetpack Compose, Views/XML, Coroutines & Flow, MVVM / MVI, Clean Architecture, Hilt / Koin, Room, WorkManager, Navigation, Retrofit/OkHttp
- **iOS:** Swift, SwiftUI
- **Cross-platform:** Kotlin Multiplatform, Compose Multiplatform, Rust shared cores via UniFFI / JNI
- **Rust:** Tokio, async, FFI, real-time camera pipelines and image processing, backend services
- **Backend & APIs:** REST and tRPC, TypeScript (Hono), Rust (Axum, SQLx), Python (Django, FastAPI), PostgreSQL (Drizzle), background jobs, WebSockets / STOMP, OAuth 2.0 / OIDC, JWT, Docker, Linux, nginx / Caddy
- **Web:** TypeScript, React (TanStack, Mantine), Svelte / SvelteKit, HTML / CSS
- **AI agents & chatbots:** agent harnesses (pi-agent-core), tool calling, prompt design, knowledge-base answering, playbooks, MCP, structured LLM extraction, Anthropic API; chatbots on WhatsApp, Telegram, Slack and email; LLM features in mobile apps; Claude Code
- **Hardware:** Bluetooth LE device configuration and firmware tooling (cellular IoT sensors, gateways), cameras, kiosk devices
- **Unity:** Unity 6 (URP), C#, native Rust plugins, Linux kiosk builds
- **Quality & delivery:** JUnit, Espresso, Gradle, GitHub Actions, Firebase (Crashlytics, App Distribution, FCM), Play Store releases

Employment

- **2026 – present, Konfi.ai:** Software Engineer (AI agent for events)
- **Aug 2021 – present, MobiusFrame:** Software Engineer (interactive installations)
- **2022 – present, PhoenixByte** (own business, freelance alongside MobiusFrame): Lead Android Engineer on Icarus
- **Sep 2020 – Jul 2021, AZIKUS:** Android Developer
- **May 2019 – Jul 2020, Ingemark:** Junior Android Developer
- **Dec 2018 – Apr 2019, Globaldizajn:** Junior Android Developer

Project experience

Icarus — aviation safety & reporting platform · Inxelo

2022 – present · Aviation · Freelance contract · Lead Android Engineer

Stack: Kotlin 2.2, multi-module Gradle (20+ modules), MVVM (StateFlow / LiveData), Koin, Room + SQLCipher, WorkManager, Retrofit / OkHttp, STOMP WebSockets, FCM, AWS Cognito + Azure AD (MSAL), Navigation / Safe Args

Offline-first Android app that airline crews and safety staff use to file safety reports, run quality audits and read operational manuals, often with no connection in flight or on the ramp. Used by 30+ airlines in 19 languages.

- Offline-first by design: every report, risk assessment and audit is stored locally in an encrypted Room database (SQLCipher, Keystore-wrapped key) so crews can work with no network.
- Built a sync-status model on each record (draft → pending → uploading → synced) so the UI always shows what is still on the device.
- Designed upload pipelines as WorkManager CoroutineWorkers: multipart attachments, recovery after process death, network constraints, exponential backoff and unique work.
- Built offline documentation sync with revision tracking and the in-house PDF viewer library, including protected "read and sign" documents.
- Real-time updates over STOMP WebSockets, FCM-triggered refreshes, SSL pinning and remote logging (Loki) for diagnosing sync issues in the field.
- Scaled the app to 30+ airline clients with configuration-driven report models, auth providers and branding; split the app into 20+ feature modules with unit tests on the sync layer.

Konfi.ai — AI agent for events

2026 – present · Events / AI SaaS · Software Engineer

Stack: TypeScript, pi agent harness (pi-agent-core, pi-ai), Anthropic API, tool calling, MCP, WhatsApp / Telegram / Slack / email gateways, Hono, tRPC, React (TanStack, Mantine), PostgreSQL + Drizzle, graphile-worker, Docker

An AI agent that talks to conference attendees in WhatsApp and other chat apps, helps organizers run the event and captures leads for sponsors. A new product already in use at live conferences.

- Work on the conversational agent that answers attendees and organizers over WhatsApp, Telegram, email, Apple Messages and Slack: a tool-calling LLM loop on the pi agent harness, with tools gated by audience and event, a knowledge base the agent answers from, and playbooks for multi-step flows.
- Built the knowledge-base review agent: it crawls an organizer's website, runs a pi loop over the pages against the event knowledge base, and produces one reviewable change proposal with open questions.
- Prototyped the onboarding, organizer and WhatsApp agents (tools, sessions, prompts, web search and URL fetching) that were ported into the product.
- Built LLM data pipelines for sales: conference discovery with structured LLM extraction and enrichment, a LinkedIn matcher and review flow, and company enrichment.
- Work end to end: messaging-gateway webhooks, Postgres migrations, background jobs, tRPC API and the React organizer app.

Casita — household app, native iOS + web · own product

2026 – present · Consumer / household · Founder and sole developer

Stack: Swift (iOS), SvelteKit (TypeScript), PostgreSQL + Drizzle, Docker

A self-hosted household app for keeping the home organized: utility bills, spending, shared shopping lists that sync live, calendar, meal planning, recipes, pantry, chores and loyalty cards.

- Building the native iOS app in Swift, including on-device scanning of Croatian payment-slip barcodes.
- Built the web app and API in SvelteKit as an installable PWA with live-syncing shopping lists and notifications; self-hosted with Docker.

Interactive brand installations · MobiusFrame

2023 – present · Experiential marketing · Software Engineer

Stack: Unity 6 (URP, C#), Rust, C FFI, FFmpeg, image processing, pose and face detection, Android kiosk mode, Linux

Camera-driven games, AR mirrors and kiosks for consumer brands at events and in stores; visitors play with their body and the app reacts in real time.

- Built 30+ Unity apps that run unattended on Linux kiosks and are configured remotely over WebSockets.
- Worked on the Rust core that Unity loads as a native library (cdylib over C FFI): camera input from webcams, RTSP streams and industrial cameras via FFmpeg, and a lock-free worker pipeline that keeps the latest frame flowing.
- Image processing in Rust, plus pose and face detection workers that turn camera frames into game input.
- Built an Android launcher for a dual-screen tabletop display that runs as device owner and keeps both screens running through crashes and reboots.

Sense4Boat Toolbox

2026 · Marine IoT / hardware · Software Engineer

Stack: Kotlin Multiplatform, Compose Multiplatform (Android + iOS), Bluetooth LE (Efento SDK), Ktor, Koin

Cross-platform field tool for installers to set up and maintain cellular IoT sensors and gateways on boats, delivered as a short project.

- Built Bluetooth LE discovery, connection and configuration for three device generations: mobile network and APN, server endpoints, encryption keys and measurement intervals.
- Added firmware updates through bootloader mode, time sync, factory reset and download of stored measurements, all from one Kotlin codebase for Android and iOS.

Education

- **MSc Computer Science** — University of Zagreb, Faculty of Electrical Engineering and Computing (FER) · 2024
- **BSc Computer Science** — University of Zagreb, FER · 2021

Languages & working terms

- Croatian (native) · English (C1)
- Contracting through my own registered Croatian business (obrt); EU clients invoiced under reverse charge; full overlap with DACH working hours.