

ARON BALOG

Resume

Full-stack & iOS Engineer
System Architect

CONTACT / PERSONAL DETAILS

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Date of Birth: April 19th, 1989
Place of Birth: Rijeka, Croatia
Years of Coding Experience: 20+
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GitHub: <https://www.github.com/aronbalog>
Medium: <https://medium.com/@aronbalog>



ABOUT ME

I have actively contributed to the development of cutting-edge technologies that revolutionized user interfaces by delivering UI components directly from the network and seamlessly rendering them on mobile applications. I wrote my first running program when I was 11.

GENERAL EXPERIENCE & KEY SKILLS

- **Programming Languages & tools:** Proficient in Swift, Objective-C, C, C++, Kotlin, Python, Java, JavaScript, PHP, Lua, Terraform, Docker, Kubernetes
- **Development:** Strong understanding of software development principles and best practices.
- **Project Experience:** Experience in developing and implementing innovative solutions for Discord, Njuškalo, HRT, Croatia Osiguranje, Rocket League, and more.
- **Problem Solving:** Proven problem-solving and analytical skills, with a keen attention to details.
- **Communication:** Effective communication and collaboration abilities, demonstrated through team projects and presentations.

- **Continuous Learning:** Continuous learner with a proactive approach.

PROFESSIONAL EXPERIENCE

Freelancing

As a contractor | JAN 2025 – PRESENT

- Built and delivered full-stack web, mobile, and AI solutions for small and mid-size businesses using Next.js, React Native, React, Vue.js, Nest.js, and Tailwind CSS, with a strong focus on design-to-code workflows and close collaboration with designers in Figma.
 - Specialized in token-based UX development and consistent design systems, translating UI/UX concepts into scalable, maintainable codebases.
 - Delivered AI-powered automation systems for accounting and operations teams, reducing manual data entry and processing time through RAG-based AI agents and workflow orchestration.
 - Designed and deployed serverless architectures with AWS Lambda and Azure Functions, implemented CI/CD pipelines and cloud infrastructure on AWS and Azure, and built custom AI agents for document processing, knowledge retrieval, and business logic automation using modern LLM frameworks and vector databases.
 - Led project scoping, requirements gathering, and technical design directly with business stakeholders, applied a “Vibe Coding” approach for rapid prototyping and iterative delivery, integrated third-party APIs and payment systems with secure authentication, and provided documentation, onboarding, and post-deployment optimization to ensure long-term maintainability and business impact.
 - Developed backend systems using Nest.js and Spring Boot using Java & Kotlin
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AI engineer, Contractor

Aestus grupa - AI System Architect | SEP 2024 – JAN 2025

- Making AI solutions for accounting company
 - Led automation project for a bookkeeping firm, cutting manual work through AI-based process redesign.
 - Managed project scoping, requirements gathering, and implementation with staff training and adoption support.
 - Evaluated vendors and selected scalable cloud/AI solutions to meet long-term business needs.
 - Documented system design and workflows for ongoing operational continuity.
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Senior iOS Engineer, Contractor

Shape 404, Zagreb | SEP 2019 – JUNE 2023

- Educated and mentored junior and mid-level developers in understanding and implementing robust app architectures.
 - Provided comprehensive training sessions and workshops on iOS app architecture principles to enhance team skills and deliver high-quality applications.
 - Collaborated with cross-functional teams (designers, backend developers) to ensure seamless integration and smooth app performance.
 - Created the initial project skeleton for large-scale app development initiatives.
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Senior iOS Engineer

Undabot, Zagreb | SEP 2015 – MAY 2019

- Responsible for refactoring the legacy code of **Njuškalo**, the largest Croatian classifieds application.
 - Prepared the codebase for new team members by creating a new coding environment, skillfully importing Swift, and isolating the Objective-C legacy part.
 - Successfully enabled the collaboration of both Swift and Objective-C components, facilitating a more efficient and productive development process.
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System Architect & Founder

Happy Community j.d.o.o. ("FreeDrink"), Rijeka | 2013 – 2015

- Founded and led the startup "FreeDrink" focused on revolutionizing the hospitality industry.
 - Pioneered a unique concept by transforming bars and restaurants into web-shops for convenient online ordering and purchasing of products and services.
 - Developed a social networking platform to enable individuals to connect and communicate while socializing over drinks.
 - Used Spring/Spring Boot with Java
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EDUCATION

University of Rijeka / Sveučilište u Rijeci, Rijeka, Croatia

- **Master's degree, Business Informatics** (2012–2015)
- **Bachelor's degree, Information Technology** (2008–2012)
- *Activities and societies: Member of Student Union*

Ivan Matetić-Ronjgov Music High School / Glazbena gimnazija Ivana Matetića-Ronjgova, Rijeka, Croatia

- Music Theory (2004–2007)
 - Served as the **conductor of a music primary school orchestra**.
 - Designed and led engaging rehearsals, providing clear direction and guidance to nurture young talent and cultivate a love for music.
 - Honed skills in effective communication, adapting to different learning styles, and managing a diverse group.
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PROJECTS

Cloud Solutions & Platform Development

Lotus Lambda - Cloud Solution

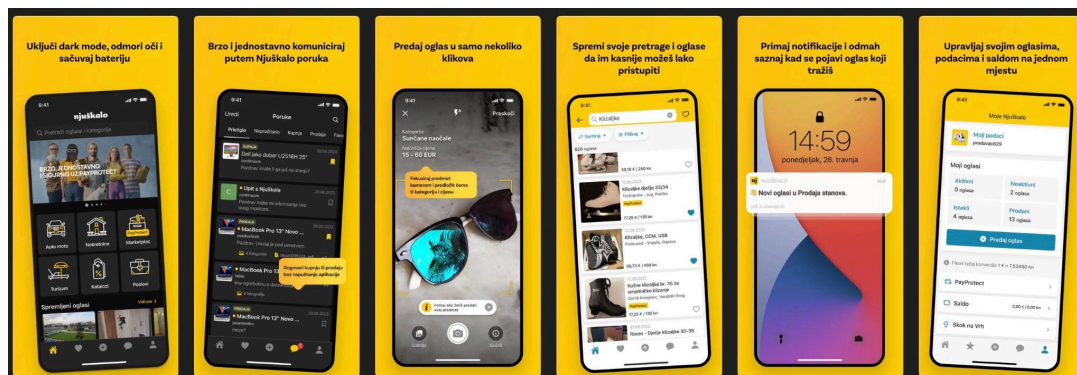
- **Co-founder** of a visionary company specializing in cutting-edge cloud solutions.
- Primary focus was the development of a groundbreaking **server-side rendering UI platform for mobile applications**.
- Revolutionized UI description and rendering on mobile devices by harnessing the power of our own innovative language, **Lotus**.

Croatian Music Library - Cloud Solution

- Spearheaded the creation of a website similar to SoundCloud for the Croatian Music Union.
- Implemented a unique feature allowing users to sell the rights to their jingles for commercial monetization.

iOS App Architecture & Development

Njuškalo - iOS App



- Played a crucial role as the **mobile app architect** in transforming the largest classifieds portal in Croatia.
- Refactored the legacy portion and incorporated **Swift** into the codebase.
- Reorganized the codebase into **multiple targets** for enhanced team productivity and implemented **unit testing**.
- Leveraged **AsyncDisplayKit (Texture)** to create complex, user-friendly UI components.

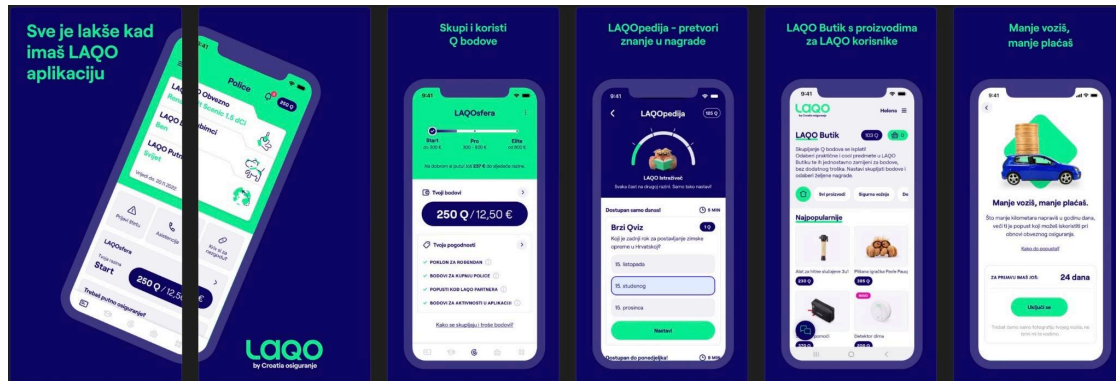
Implemented new native features, such as **dynamic form submissions**, in collaboration with designers and cloud architects.

Juhuhu - iOS App (HRT)



- Served as the **architectural lead** for the Juhuhu app, collaborating with the Croatian national television (HRT) to develop an innovative app for kids.
- Designed architecture and implemented the cutting-edge **SwiftUI framework**.
- Created a user-friendly and engaging platform reminiscent of a **"Netflix for kids"** concept.

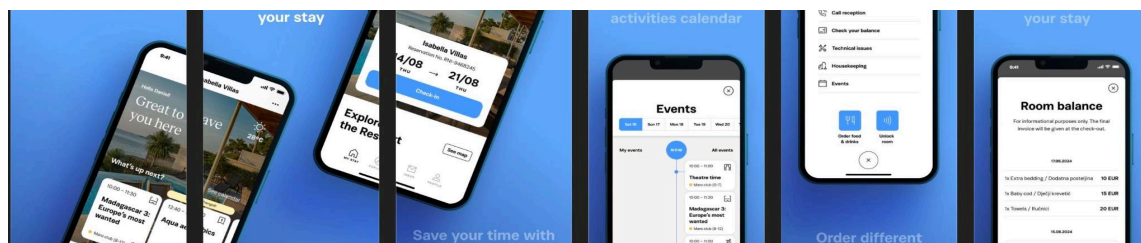
LAQO - iOS App (Award-Winning Project)



- Played a pivotal role as the **iOS app architect** for the LAQO insurance project.
- Created a seamless bridge between **UIKit and SwiftUI** for a smooth transition and enhanced user experience.
- Developed a **dynamic forms UI and logic system** that integrated specifications delivered through APIs, eliminating the need for frequent updates.
- The app **won multiple prestigious awards**, highlighting exceptional quality and innovation.

Educated and mentored multiple junior and mid-level developers on the project

Valamar - iOS App



- Led the development of the iOS application for the Valamar insurance platform, taking responsibility for overall direction and delivery.
- Guided the team through major product and design transitions while ensuring a consistent and high-quality user experience.
- Contributed to a product that received multiple industry awards for quality and innovation.
- Mentored and supported junior and mid-level developers through hands-on guidance, code reviews, and knowledge sharing, strengthening team performance and collaboration.

Open-Source Projects

CoreNavigation

- **Project Link:** github.com/aronbalog/CoreNavigation
- Created a new solution to simplify and enhance navigation in iOS applications, addressing shortcomings in Apple's native APIs.
- Provides simple APIs for data passing between screens, conditional navigation, state restoration, **URL navigation (deep linking)**, caching, and navigation history handling.

Vox

- **Project Link:** github.com/aronbalog/Vox
 - A **Swift JSON: API client framework**.
 - Uses **Marshalling and Unmarshalling techniques** for direct memory access and performance, instead of mapping JSON to resource objects.
 - The **Proxy design pattern** allows manipulation of JSON's value directly through class properties.
 - Officially mentioned as an iOS client library on the JSON: API website
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GAMING & DISCORD DEVELOPMENT EXPERIENCE

Discord Bot Developer

- Over **2 years of experience** specializing in **economy systems within GTA FiveM**.
- Developed custom Discord bots using **TypeScript, JS, C++ and Lua** to facilitate seamless transactions, market systems, and engaging player interactions for GTA FiveM servers.

Rocket League Plugin Developer

- Designed and developed plugins for **Rocket League** using **BakkesMod and RL SDK**.
- Implemented **Discord integration** within Rocket League, bridging communication between casters and audience.

Articles written

- [Spring Boot + Kotlin + GraphQL + MongoDB — Part 2: Mutations](#)Hack the stack.
- [Spring Boot + Kotlin + GraphQL + MongoDB — Part 1](#)Hack the Stack
- [#3 iOS — Reinventing view controller navigation](#)Handle Universal Links Like a Boss.
- [#2 iOS — Reinventing view controller navigation](#)Passing data between view controllers.
- [#1 iOS — Reinventing view controller navigation](#)Forget about segues.
- [#0 iOS — Reinventing view controller navigation](#)present & push... For how long?
- [Series 7— Custom operators for better code readability.](#)Basic usage of custom operators is demonstrated in Series 6. But can we use them for something else? In this post we are gonna do little...
- [Series 6— Custom operators combined with localization](#)In this episode we are gonna use custom operator for setting localizable strings on UI components.
- [Gimme some sugar.](#)In one of the previous posts I demonstrated how to use Selector extension to prettify your code. In this post we are gonna make it even...
- [Gimme some sugar. Series 4 — Mutating in block](#)Take a look at this code example:
- [Gimme some sugar. Series 3 — #selector#selector — not an insta/twitter tagging concept.](#)this is regular Swift syntax which is a bit different from other stuff in this beautiful...
- [Gimme some sugar. Series 2 — Casting without ? and ! syntax](#)We definitely hate to see ? and ! in code.
- [Gimme some sugar. Series 1 — Array of optionals](#)Swift's flatMap method is commonly used to transform array of optional (nullable) elements to the one with non-optional elements but it...