

Dominik Zachar

Software Architect & Engineer

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Professional Summary

Full-stack engineer and technical leader with 11+ years of experience, specializing in TypeScript and Rust across distributed systems, web platforms, and cloud infrastructure. Equally comfortable in front-end performance, backend architecture, smart contracts, and infrastructure — the kind of range that comes from genuine curiosity about the whole stack rather than choosing a lane early. Long track record of owning critical systems end to end and leading small engineering teams through the messy parts of shipping. Crypto-native: spent the last 4+ years building governance, treasury, and on-chain infrastructure for the Cardano ecosystem in roles ranging from Solution Architect to CTO. Still genuinely excited about new technology — the projects I take on outside of work (Vultrino, Triage Warden, AmigaAI) are the ones that pull me into whatever's next.

Experience

Founder & Engineer — AmigaAI

2025 – Present · Remote

- › Sole owner of the full stack for an AI companion language-learning app (private beta) — product, architecture, and execution
- › Designed a multi-provider AI architecture (OpenAI Realtime, Gemini, Grok) with real-time WebSocket audio streaming on a Bun/Elysia (TypeScript) backend
- › Built React Native (Expo) mobile app with custom native audio modules in Swift and Kotlin
- › Engineered a custom PCM audio pipeline with adaptive jitter buffer, spaced-repetition scheduling (SM-2), and pgvector-based semantic memory

CTO — Cypher Enterprises

Dec 2024 – Feb 2026 · Remote

- › Led a team of 3 engineers and set technical direction for the Summon Platform — governance and treasury infrastructure used across the Cardano ecosystem
- › Owned architecture decisions, code review, and engineering standards across TypeScript, Rust, and Aiken codebases
- › Delivered production governance voting portals for IntersectMBO during Cardano's transition to community governance — including ICC elections, blockchain-wide polls, and ranked-choice voting reaching the broader community
- › Built an OAuth 2.0 service in Rust for cryptographic wallet-based authentication
- › Shipped Rust API SDK and Aiken (PlutusV3) smart contracts for on-chain multisig and forum validators

Solution Architect — The Summon Platform

Sep 2022 – Nov 2024 · Remote

- › Owned end-to-end architecture for DAO governance infrastructure: voting systems, multisig wallets, staking portal, vesting contracts
- › Platform served ~1,000 monthly active users in steady state, scaling to ~100,000 participants during major votes (e.g. blockchain-wide community polls)
- › Built and ran early experimentation infrastructure for the platform — feature flags and A/B tests on governance flows to learn what actually drove participation
- › Made the core stack decisions (TypeScript, Rust, Haskell, Next.js) and the deployment model (self-hosted Linux/Nginx with AWS and Railway)
- › Translated product and community requirements into reliable, measurable engineering solutions

Dev Lead & Core Contributor — ADAO

Jan 2022 – Dec 2024 · Remote, open source

- › Led the development working group (4–10 contributors at any given time) for an open-source DAO — coordinating contributors, reviewing PRs, and setting direction for shared tooling
- › Contributed upstream to the Lucid library (a foundational Cardano TypeScript SDK) used across the ecosystem
- › Built NFT minting systems, escrow services, and multisig faucets in TypeScript, Aiken, and C#

Software Engineer — CGI

Apr 2020 – Dec 2021

- › Led the Azure cloud migration of a secure file management platform from on-prem SharePoint 2016/19 to SharePoint Online — IAM redesign, tenant cutover, and rollout planning
- › Built the underlying platform with ASP.NET MVC, SPFx, and React, including access controls and audit logging

Data Integration Engineer — Tieto

2018 – 2020

- › Built data pipelines on Azure, Kubernetes, Databricks, provisioned via Terraform (infrastructure-as-code)
- › Implemented network segmentation, managed identities, and least-privilege access across multi-tenant workloads

Earlier Career

2015 – 2018

- › Software Engineer @ Cegeka, CRM Factory, Nazaret — C#, Dynamics 365, ASP.NET

Independent Projects & Open Source

Products

- › AmigaAI — AI companion language-learning app; full-stack ownership (React Native, TypeScript, Bun/Elysia, native Swift/Kotlin modules) - amigai.co
- › Vultrino — Credential proxy for AI agents with WASM plugin system and MCP integration (Rust, WebAssembly) — vultrino.com
- › Triage Warden — AI-augmented SOC triage system (Rust, Python, LLM) — triagewarden.com
- › CardanoSounds — Generative audio NFT platform; transaction-seeded algorithmic music (Next.js, p5.js, C#, Plutus)
- › react-sequencer / signal — Browser-based music sequencers (React, Tone.js, Web Audio API)

Cardano Ecosystem

- › Vista Foundation Smart Contracts — Sole developer of Aiken/Plutus V3 contracts (escrow, custodial transfer, permissioned minting)
- › Vista Bridge — Cross-chain asset bridge (Rust, UTXORPC, SQLite)

Audits & Reviews

- › Java backend audit (supply chain), React Native web3 app audit, Haskell smart-contract audit fixes

Technical Skills

Domain	Technologies
Core Languages	**TypeScript, Rust** — daily for 4+ years across production systems
Other Languages	Python, C#, Haskell, Elixir, Swift, Kotlin
Backend	Bun/Elysia, Next.js, Axum, Actix, ASP.NET, Fastify; WebSockets, REST, real-time streaming

****Frontend / Mobile****

React, Next.js, React Native (Expo), custom native modules

****Distributed Systems****

Multi-cloud architectures, real-time streaming, governance systems at community scale, cross-chain bridges

****Infrastructure****

Docker, Kubernetes, Terraform, AWS, Azure, Linux, Nginx, self-hosted deployments

****CI/CD****

GitHub Actions, Jenkins, GitLab CI/CD

****Data & Caching****

PostgreSQL, pgvector, Redis (caching, Lua scripts, rate limiting), SQLite, Databricks

****Growth &
Experimentation****

A/B testing, feature flags, governance-flow experimentation

****Crypto / Blockchain****

Cardano (Plutus, Aiken, Lucid), UTXO systems, multisig, governance infrastructure, cross-chain

****AI / ML****

LLM integration, multi-provider AI (Anthropic, OpenAI, Gemini), multi-modal inputs and native audio, MCP, vector search

What I Bring

- › Leadership through code and context — comfortable setting technical direction for small teams (3–10 engineers), reviewing across stacks, mentoring by example
 - › Product mindset — multiple shipped products as founder, architect, or lead; I think in terms of users and outcomes, not just code
 - › Range — equally at home in front-end performance, backend architecture, smart contracts, and infrastructure
 - › Crypto conviction — 4+ years deep in the Cardano ecosystem by choice, not by accident
 - › Still excited about the tech — eleven years in and the side projects keep multiplying; I take on new platforms (AI agents, native mobile audio, smart contract languages) because I want to, not because someone asked
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Interests

Chess, generative art and audio, drawing, painting — a creative lens I carry into how I design systems.