

# SIMON ROTHERT

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## PROFILE

Lead AI engineer and infrastructure architect with CTO experience. Builds AI systems on AWS for regulated industries, and has shipped distributed backends, Rust on-chain platforms, and TypeScript products.

Takes platforms from first commit to production. Has led engineering teams of four to ten.

## CORE COMPETENCIES

AI Agent Infrastructure · AWS Cloud Architecture · Infrastructure as Code · Distributed Systems Architecture · Regulated Environments (GDPR) · Rust Smart Contracts (Canisters) · Vector Search

Architecture Leadership · TypeScript Ecosystems · Next.js · React Native · DevOps · Multi-Service Backends · Code Analysis Engines

## SPECIALIZATION FOCUS

AI Agents on AWS Bedrock · Cloud Infrastructure and IaC · Distributed Systems · Rust Smart Contracts (Canisters) · Vector Search · TypeScript Architectures

## KEY ACHIEVEMENTS

- Sole engineer on a regulated gambling operator's internal AI platform, from architecture to production — including custom-trained models for regulatory copy compliance.
- Built fully on-chain P2P platforms using Rust-based Internet Computer smart contracts (canisters).
- Processed thousands of on-chain transactions across dozens of unique wallets on several crypto platforms.
- Led BIYU from its first codebase to a production platform.
- Designed multi-agent AI systems that evaluate code, generate challenges, and adjust difficulty.
- Helped close EUR 200k+ in funding by providing the technical validation and roadmap.
- Delivered production systems across AI, mobile, backend, 3D, and on-chain products.

## TECH LEADERSHIP

- Led cross-functional engineering teams (4-10 devs) across frontend, backend, mobile, and on-chain workflows.
- Designed system architectures and technical roadmaps.
- Mentored junior and mid-level developers; established code standards and review processes.
- Shaped product strategy by matching engineering capacity to business goals.

## EXPERIENCE

### Lead AI Engineer & Infrastructure Architect

Sherpa Digital — Amsterdam · 2026–Present

Lead AI engineer at an agency building AI systems for clients. Main account is a regulated gambling operator, building their core internal AI platform on AWS under GDPR and Dutch gambling regulation.

- Build a regulated gambling operator's core internal AI platform on AWS, using Bedrock AgentCore for agent runtime, memory, and identity.
- Build and ship 8 systems as the only engineer on the account, 3 of them now in production.
- Build RBAC-controlled RAG assistants and knowledge-base tools with human review, web crawlers, and sanitization checks.
- Train custom sequence-tagging models (GECToR-style) for a copy-compliance system that makes up to 200 edits per campaign, checking text against internal policy and gambling law.
- Build ERP-integrated batch-payment checks with digital signatures and audit trails, player-welfare risk assessment on highly sensitive personal data, and automated legal screening for new betting markets.
- Build the VPC networking and ingress/egress controls, defined in Terraform, that keep regulated data inside the compliance boundary.

- Work to AWS best practice, with architecture reviewed by the client's AWS-partner engineering team.

## Co-Founder & CTO

Theseuslabs — Amsterdam · 2025–Present

own venture — co-founded, alongside the Sherpa Digital role

Technical founder. Leads architecture and engineering for two products: a Rust learning platform and a creator fan-token platform.

- Build rust-skill.com, a Rust learning platform in Next.js and TypeScript, with multi-agent workflows on Claude and OpenAI.
- Integrate a Rust code-analysis engine for compiler-accurate evaluation.
- Design the TypeScript backend, including vector search, content pipelines, and adaptive difficulty.
- Implement multi-agent workflows generating challenges, evaluating solutions, and adjusting difficulty.
- Deliver MVP in three months and onboard the first paying subscribers.
- Build curve.fan (FanCurve), a creator fan-token platform on the Internet Computer: eight Rust canister types with per-creator ICRC-1 ledgers, bonding-curve pricing, sharded user profiles, and automated cycle management.
- Ship curve.fan's Next.js 16 frontend with multi-chain auth (Internet Identity, Sign-In With Ethereum, Solana) and an Axum analytics microservice on Cloud Run backed by Postgres, GCS, and BigQuery.

## Co-Founder & CTO

Several Crypto Platforms — International · 2024–2025

Co-founded and led engineering across several on-chain crypto platforms, owning protocol design, architecture, and launch.

- Architected and implemented fully on-chain P2P engines using Rust and Internet Computer smart contracts (canisters).
- Built deterministic on-chain state machines with decentralized randomness, verifiable identity, and auditable state transitions.
- Directed launchpad development with on-chain identity, onboarding flows, and settlement pipelines.
- Processed thousands of on-chain transactions across dozens of unique wallets.
- Helped close a EUR 200,000 pre-seed by providing technical validation and a clear roadmap.
- Led community communication and product direction.

## CTO (promoted from Senior Full Stack Developer)

BIYU — Munich/Amsterdam · 2023–2024

Joined as a senior full stack developer and promoted to CTO. Led platform architecture across web, backend, and mobile.

- Owned architecture across web, backend, and mobile; set technical direction and delivery strategy.
- Took BIYU from its first codebase to a production platform.
- Refactored critical NestJS services, improving reliability and reducing operational overhead.
- Led engineering through code reviews, sprint planning, and technical standards.
- Built BIYU's React Native mobile app for iOS and Android with deep logistics integration.
- Built backend features using NestJS and TypeORM across TypeScript microservices.

## Senior Full Stack Developer

Pickatale — Munich/Oslo · 2022–2022

Owned mobile and backend features across iOS, web rendering, and email services.

- Implemented core features in Pickatale's iOS app using Swift and Objective-C.
- Built a custom EPUB rendering pipeline in React for book playback.
- Built a multi-region email service in NestJS with dynamic template rendering.

## Principal Developer

SMAL Code — Munich/Amsterdam · 2020–2022

Led a small team delivering 3D visualization and enterprise tooling.

- Led a team of four developers across sprints, architecture planning, and code quality enforcement.
- Developed Unity-based 3D configurators and visualization tools for enterprise clients like Elgato.
- Created advanced Three.js product inspectors for interactive product exploration.

- Built technician/customer communication tools for ChargePoint's operational workflows.

## EARLY CAREER

2012–2020 · Developer roles across SMAL Code, Ziba Design and Freelogic GmbH — full-stack work (React, Angular, Swift, PHP, Django), Unity and Three.js 3D configurators, and internal tooling automation. Award-winning design and front-end work in this period, including the Vodafone Devices Website.

## AWARDS

### iF DESIGN AWARD — Communication Design Excellence

Vodafone Devices Website · 2017

Awarded for the Vodafone Devices Website — photorealistic product renderings, interactive animation and a fully responsive build for the 'Take a closer look' campaign.

### Red Dot Design Award — Innovative Product Design — Honourable Mention

muun mattress · 2018

Honourable Mention in Product Design for the muun modular mattress — adjustable comfort and firmness in raw silk and latex foam.

## TECHNICAL SKILLS

|                               |                                                                                                                                                                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Languages:</b>             | TypeScript (expert), JavaScript, Rust (on-chain systems, code analysis tooling), Swift, Python, C/C++, C#, SQL                                                                                                                            |
| <b>Frameworks:</b>            | React, Next.js, React Native, NestJS, Django, Unity, Three.js, Axum, Vue                                                                                                                                                                  |
| <b>AI / Machine Learning:</b> | RAG systems, Multi-agent orchestration, AWS Bedrock / AgentCore, Custom model training (sequence tagging), Agent evaluation, Knowledge base systems, Embeddings, Vector search, OpenAI API, Claude API                                    |
| <b>Blockchain / Web3:</b>     | Internet Computer, Canister development, ICRC-1 ledgers, Bonding curve design, Sign-In With Ethereum (SIWE), Cycle management, Decentralized randomness, Identity systems                                                                 |
| <b>Mobile:</b>                | React Native, SwiftUI, UIKit                                                                                                                                                                                                              |
| <b>Backend / Cloud:</b>       | AWS (Bedrock, VPC, IAM, S3), Terraform, Infrastructure as code, VPC networking (ingress/egress), Google Cloud Run, BigQuery, PostgreSQL, Redis, Docker, Microservices, Distributed systems, CI/CD pipelines, Authentication systems, RBAC |
| <b>Tools:</b>                 | Git, Vite, Webpack, TailwindCSS, Nx, DFX, PocketIC, Vercel, Figma, Jira                                                                                                                                                                   |

## LANGUAGES

German (Native), English (Fluent)

## EDUCATION

### Staatliche Berufsschule Fürstenfeldbruck

Computer Programmer — Software Development

Germany · 2012–2015