WILLIAM WOLFF

Software Engineer · Technical Architect · Product Thinker

Berlin, Germany · German & English

Email   LinkedIn   GitHub

PROFILE

Curious, relentlessly-learning engineer with 10+ years building high-impact products from green-field prototype to production at scale. Deep expertise in blockchain infrastructure, distributed systems, and secure application development. Founder DNA with proven ability to ship products that generate revenue and drive user engagement. Strong product sense—understanding how exceptional engineering creates exceptional user experiences. Track record of technical leadership, growing teams, and making strategic architectural decisions that reduce costs and improve performance.

Passionate about working on technically challenging problems that contribute to meaningful missions—progressing humanity through better technology, infrastructure, and user experiences.

EXPERIENCE

R&D Innovation Lead & Technical Architect   Nov 2024 – Present

Input Output Global (IOG)

Leading research and development of Ouroboros Leios, a high-throughput overlay protocol for Cardano blockchain, coordinating cross-functional team and driving toward mainnet implementation.

- **Technical Leadership & Team Coordination:** Direct team of 8 researchers and engineers across formal methods, protocol design, and prototype development
- **Defining Direction:** Translated open research into executable roadmap—authored CIP-0164 (Cardano Improvement Proposal, industry RFC comparable to Bitcoin's BIPs or IETF standards)
- **Architecture & Strategy:** Designed simulation-driven approach validating protocol behavior before mainnet; created decision log tracking architectural choices and rationale
- **Cross-Org Coordination:** Bridge formal methods researchers, protocol engineers, and product teams—navigating complex technical trade-offs
- **Communication:** Host monthly public demos and Q&A sessions (5k+ average views); translate complex research for diverse audiences
- **Workshop Facilitation:** Organized week-long on-site workshop that reduced open research questions and aligned team on implementation strategy

Technical Architect – Lace Wallet   Nov 2022 – Nov 2024

Input Output Global (IOG)

Led technical architecture and backend infrastructure for Lace, a next-generation Cardano wallet, delivering significant performance improvements and new revenue-generating features.

- **Backend Re-Architecture:** Re-engineered from poll-based to event-driven architecture—45% latency reduction, 60% + infrastructure cost savings
- **Custom Chain Indexer:** Built indexer with bloom filters and credential-based indexing; 2,000+ tx/s ingest capacity, sub-second wallet sync
- **Industry Standards:** Authored CIP proposal for wallet indexing standards adopted in ecosystem
- **Product Leadership:** Led 7-person cross-functional team (3 FE, 2 BE, 1 QA, 1 PM) delivering MetaDex swap feature—first revenue stream for Lace

- **Shared Tooling:** Built transaction construction libraries and event-driven patterns adopted across multiple product teams
- **Technical Innovation:** Developed background web worker sync approach later adopted by team as standard pattern

Solutions Architect
Nov 2021 – Nov 2022

Input Output Global (IOG)

Designed blockchain solutions and educated enterprise partners on Cardano's technical architecture.

- **Smart Contract Architecture:** Designed complete Plutus stack for collateralized debt position (CDP) platform
- **Technical Education:** Conducted workshops for 100+ Amazon engineers on eUTxO model, smart contracts, and dApp patterns
- **Knowledge Transfer:** Created training materials and hands-on exercises for blockchain education

Senior Software Engineer
Feb 2020 – Nov 2021

Mobility Data Lab GmbH, Berlin

Built IoT and data processing systems for connected vehicle platform.

- **Fleet Management:** Delivered complete OTA fleet-update pipeline for connected vehicle hardware
- **IoT Platform:** Built OTA update mechanism (Rust embedded, Vert.x backend) with rollback capabilities
- **Analytics:** Designed real-time data pipeline using ELK stack for Miles and Share Now car-sharing services
- **Pilot Launch:** Successfully launched with 20+ vehicles

Senior Software Engineer & Migration Lead
Sep 2016 – Nov 2019

Deloitte, San Francisco

Led large-scale legacy system migration for major German insurance company.

- **Migration Toolchain:** Architected 3-stage pipeline (parser → transformer → generator) converting 16M LoC from proprietary DSL to Java 8
- **Business Impact:** Saved client €6M annually in licensing costs
- **Team Growth:** Scaled team from 3 to 20 engineers over 24 months; promoted to lead architect
- **Quality Assurance:** Built differential testing framework achieving 99.9% compatibility rate
- **Global Coordination:** Coordinated with offshore teams in India; established testing standards adopted organization-wide

Co-Founder & CTO
Feb 2015 – Sep 2016

CityXcape Inc., San Francisco

Technical co-founder of social discovery platform for exploring cities through community-driven recommendations.

- **Product Development:** Built native iOS app (Swift) and Django/Rails backend from concept to App Store launch
- **Fundraising:** Raised €150k in seed funding from angel investors
- **Team Leadership:** Led technical team of 2-3 contract developers; defined product vision and roadmap

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PROJECTS

Dump it! – AI-Enhanced Note Taking
2023 – Present

iOS, Android, Web

Cross-platform application with end-to-end encryption and sophisticated AI processing pipeline.

- **Full-Stack:** Native iOS (Swift/SwiftUI), Android (Kotlin/Compose), and React web app with feature parity

- **E2E Encryption:** Diffie-Hellman key exchange + AES-256-GCM + iOS Secure Enclave—zero backend access to user data
- **AI Pipeline:** Two-phase LLM processing (Claude for intent, pgvector for semantic search, Whisper for speech-to-text)
- **Architecture:** Event-sourced with SSE streaming; offline-first with persistent queue sync
- **Traction:** 5k+ notes, 200+ users, 70% weekly retention; shipped to App Store and Google Play

Drip Dropz – NFT Marketplace   2022 – 2024

Cardano

Production NFT trading platform built from scratch.

- **Frontend:** React/TypeScript SPA with CIP-30 wallet integration and background web worker sync
- **Smart Contracts:** Plutus integration for bidding, selling, swapping, and order management
- **Launch:** 10k+ NFT listings; first revenue within 48 hours
- **DevOps:** TDD practices with Jest; CI/CD pipeline for reliable deployments

Berlin Pool – Stakepool Operations   2021 – 2024

Cardano Infrastructure

Operated Cardano consensus nodes contributing to network decentralization.

- **Node Operations:** Produced 2,000+ mainnet blocks; maintained 99.9% uptime; 15M+ ADA delegation
- **Security:** Air-gapped cold key storage; secure key rotation procedures
- **Infrastructure:** Automated deployment with Docker, Ansible, Terraform; Prometheus/Grafana monitoring

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SKILLS

Languages
TypeScript (expert), Rust, Swift, Java/Kotlin, Python, Haskell/Plutus

Security
E2E encryption, Diffie-Hellman, AES-256, Secure Enclave/TEE, Key management

Web & Mobile
React, React Native, NestJS, Swift/iOS, Kotlin/Android

Blockchain
Cardano (eUTxO), Plutus, CIP standards, Consensus protocols, Wallet standards

Infrastructure
Distributed systems, Event-driven, PostgreSQL, Redis, gRPC, Microservices

AI/ML
LLM integration (Claude, GPT-4), Vector search, Embeddings, Whisper

DevOps
Docker, Terraform, Ansible, GitHub Actions, CI/CD, AWS, Prometheus/Grafana

Leadership
Team building, Technical strategy, Architecture docs, Workshop facilitation

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EDUCATION

M.A. International Business · Hult International Business School, San Francisco   2014 – 2015

B.Sc. Computer Science · DHBW Stuttgart, Germany   2011 – 2014

INTERESTS

Beach Volleyball · Freediving · Fitness · Economics & Blockchain Technology · Science Fiction · Open Source