

# ARKADIUSZ KONIOR

Rust Systems Engineer · Warsaw, Poland · [akonior@gmail.com](mailto:akonior@gmail.com) · (+48) 505 675 723 · [LinkedIn](#) · [GitHub](#)

## SUMMARY

Rust systems engineer with 15+ years of experience building distributed and correctness-critical systems. Background in mathematics. Focused on strongly-typed architectures, functional design, blockchain infrastructure (Cardano), cryptography, and zero-knowledge systems. Experienced in remote collaboration, cross-team communication, and delivering production-ready systems aligned with business value.

## EXPERIENCE

- **Open Source Engineer – YubiKey Cardano Wallet (Project Catalyst-funded)** · Dec 2025–Feb 2026  
Led end-to-end system architecture, design, and implementation of a hardware-integrated Cardano wallet in Rust.  
Implemented Cardano key derivation (CIP-1852) and ED25519 signing flows.  
Secured Project Catalyst (Cardano Treasury) funding and delivered milestone-based development.  
Applied functional core / imperative shell architecture and strong type-driven domain modeling.  
Tech: **Rust, Cryptography, Cardano, CLI, Hardware integration**.
- **Blockchain & ZK Engineer – vlayer Labs** · Sep 2023–Aug 2025  
Designed and implemented core Rust components for blockchain and zero-knowledge infrastructure.  
Worked on protocol-aware architecture and core library design.  
Tech: **Rust, Typescript, Zero-Knowledge Cryptography, Ethereum, AWS**
- **Software Engineer – Allegro** · Dec 2018–Aug 2023  
Designed and implemented large-scale microservices in Kotlin/Scala for Poland's largest e-commerce platform serving millions of users. Worked on distributed systems with high reliability requirements.  
Tech: **Kotlin, Scala, Spring, Apache Spark, GraphQL, MongoDB, Microservices, Google Cloud Platform (GCP)**
- **Senior Android Developer – YND Consult** · Dec 2016–Nov 2018  
Built production fintech and POS applications. Developed blockchain PoCs (Hyperledger Fabric).  
Tech: **Kotlin, Java, Hyperledger**
- **Earlier Experience** · 2006–2016  
Software Engineer (Polidea, apreel, 7bulls, NEC Laboratories America).  
Java enterprise, financial platforms, Linux kernel modules, and wireless communication systems (C, Python, Java).

## SKILLS

- **Languages:** Rust, Kotlin, Scala, Java, TypeScript, Python, Haskell
- **Engineering Practices:** Type-driven development, test-driven development (TDD), SOLID principles, Agile (Scrum, Kanban), AI-assisted development workflows
- **Systems & Architecture:** Distributed systems, Microservices, Systems-level engineering, REST APIs, GraphQL, Hexagonal/Clean Architecture, Strong type modeling, Concurrency, Blockchain (Cardano, Ethereum)
- **Infrastructure & Tooling:** Git, GitHub, GitHub Actions, Docker, Cargo, Kafka, Prometheus, Kibana, PostgreSQL, MongoDB, Gradle, Linux

## EDUCATION & CREDENTIALS

- **MSc Mathematics**, University of Warsaw (2002–2007), Erasmus Exchange – Vrije Universiteit Amsterdam
- **BSc Computer Science**, University of Warsaw (2005–2010)
- PhD Studies in Mathematics (completed 1st year)

Plutus Pioneer Program Certificate – Input Output Global  
Cardano Blockchain Certified Associate

Functional Programming Principles in Scala – Martin Odersky  
Polish Mathematical Society - Best Master Thesis in Probability Theory - Distinction  
Ministry of Education Scholarship  
Conference Speaker: Warsjawa, Mobilization, Jinkubator, Mobile Trends, 4Developers  
Languages: Polish (native), English: Fluent (CAE)

## PASSIONS

Functional programming, dependent types (Agda, Idris), type theory, category theory, formal foundations of mathematics, correctness-by-construction systems, content-addressable distributed systems (Unison). Running, cycling, winter swimming.

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