# Gianguido Sorà

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## Summary

Results-driven Lead Software Engineer specializing in Go and distributed systems. Proven track record of designing high-performance back-end architectures, building highly available, fault-tolerant infrastructure, and leading remote-first engineering teams.

## Experience

**Senior Software Engineer** Jan. 2025 – Present

*Asymmetric Research* *Remote*

- Architected and developed a high-throughput distributed fuzzing orchestrator in **Go**, scaling execution to over 100+ billion simulation iterations and successfully surfacing 200+ software vulnerabilities.
- Designed and implemented foundational backend systems from scratch, including a high-performance data ingestion pipeline, optimized **PostgreSQL** database models, and a scalable storage subsystem utilizing **AWS S3**.
- Partnered with SREs to manage the cloud environment, leading the strategic migration of core infrastructure away from serverless architectures to **AWS EKS** and **RDS** to optimize sustained compute performance.

**Protocol Team Lead** Aug. 2023 – Dec. 2024

*Obol Network* *Remote*

- Directed the adoption of highly available, fault-tolerant infrastructure for enterprise clients, successfully securing over $30M in digital assets.
- Spearheaded the refinement and launch of Obol's flagship product, marking its first-ever stable release.
- Slashed release times by 50% by designing and implementing the company's first performance measurement framework based on matrix testing.
- Streamlined the talent acquisition pipeline by creating a novel technical evaluation framework, successfully hiring and onboarding two engineers within two months.

*Senior Software Engineer* *Jan. 2023 – Aug. 2023*

- Architected an algorithm-agnostic cryptography framework, enabling rapid mitigation and pivoting in the event of critical security vulnerabilities.
- Fortified secure multi-party computation (SMPC) and cryptographic key generation processes to protect against user misuse and external adversarial attacks.
- Established and validated the leading product's threat model in collaboration with external security auditors.
- Successfully navigated the product's first third-party code audit, developing and shipping critical enhancements based on auditor findings.

**Software Engineer** Mar. 2021 – Nov. 2022

*Ignite (previously Tendermint)* *Remote*

- Accelerated disaster recovery chain data import times by **60x** by optimizing data ingestion pipelines.
- Designed and deployed the microservice-based architecture for the Emeris project, personally implementing 4 core microservices in **Go**.
- Engineered high-performance, **PostgreSQL**-based data ingestion pipelines for large-scale distributed peer-to-peer networks.
- Built a **W3C**-compliant decentralized identity architecture, engineering the underlying data validation and storage layers.

**Software Engineer** Nov. 2019 – Feb. 2021

*Commercio.network* *Remote*

- Accelerated the `mainnet` release of the company's Cosmos SDK-based blockchain node, achieving annual company targets three months ahead of schedule.
- Coordinated the testing and correctness efforts across multiple complex company code repositories.
- Engineered customer-facing REST API back-end services to seamlessly interact with in-house front-end interfaces.
- Researched and implemented an MVP for a cryptographic, **W3C**-compliant verifiable credential system.

## Projects and Open-Source

`xous-core` — An operating system for security-oriented devices. | *Rust, GitHub*

- Implemented USB-based upload/download functionality for the `vault` FIDO2 application.
- Created an abstraction layer allowing developers to seamlessly write applications that act as USB HID devices.
- Improved system UI/UX based on direct usage experience and community feedback.

`fidati` — FIDO U2F Hardware Authenticator. | *Bare-Metal Go (TamaGo), USB armory Mk II*

- Engineered a fully functional FIDO-compliant hardware security key from scratch, compiling Go directly to bare-metal hardware without an underlying operating system.
- Implemented low-level USB device drivers, custom HID interfacing, and deterministic ECDSA key derivation to interface securely with the USB armory Mk II SoC.

`WallERA` — Bare-Metal Hardware Wallet. | *Go (TamaGo), ARM TrustZone* [Date]

- Engineered a Ledger-compatible hardware wallet firmware compiled directly to bare-metal ARM architecture.
- Implemented custom USB HID transport packet framing (APDU) and secure cryptographic derivation pipelines.

## Education

**Universita' degli Studi di Salerno** Salerno, Italy

*Bachelor's Degree in Computer Science* *Sep. 2013 – Oct. 2019*

## Technical Skills

**Programming Languages**: Go, Rust, Python, Swift, SQL (PostgreSQL).
**Infrastructure & Tools**: Kubernetes (K8s), Docker, AWS (EKS, RDS, S3), Ansible, Linux, Git, GitHub Actions, Shell Scripting.
**Developer Workflows**: Agile/Scrum, GitHub, GitHub Actions, AI Coding Assistants (self-hosted LLMs, Claude Code).