

Filippo Costa

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Dubai, UAE; flexible working hours

experience

Sovereign Labs , Sr. Protocol Engineer	<i>Jun. 2023 - present</i>
Co-designed a modular Rust framework & SDK for building ZK rollups.	
<ul style="list-style-type: none">Introduced testing, OpenTelemetry monitoring, documentation, DevEx, security tools (MIRI, AFL), and CI best practices.Wrote tools to (1) automatically test example code blocks in README files, (2) run crate pre-release checks in CI, and (3) reduce project compilation times.Authored a scalable L2 block explorer backend with REST and GraphQL APIs, PostgreSQL and SQLx.	
Edge & Node (prev. The Graph) , Rust Software Engineer	<i>Feb. 2022 - Jun. 2023</i>
Developed security patches, new features, and internal tools for Graph Node .	
<ul style="list-style-type: none">Lead work on Graphix, a data inconsistency monitoring and rootcausing tool for The Graph Network and its data.Authored, documented, and owned release engineering processes for several major products.Co-lead cloud offering deprecation in favor of network queries, which resulted in cloud costs down by ~10% and targeting ~80% by Q4 2023, and increase in query fees and network rewards.	
Spacemesh , Core Protocol Developer	<i>Jul. 2021 - Feb. 2022</i>
Helped develop a novel WebAssembly-based smart contract execution engine in Go, C, and Rust.	
<ul style="list-style-type: none">Identified and fixed 10s of consensus-threatening determinism bugs.Assisted R&D with iterative prototyping and protocol improvement proposals.	
Bitwyre , Part-Time Contractor, Rust Software Developer	<i>Dec. 2020 - Jul. 2021</i>
Implemented Financial Information eXchange (FIX) APIs upon my open-source project FerrumFIX .	
<ul style="list-style-type: none">Adopted TDD to implement highly technical protocols for low-latency systems.Programmed asynchronous network code leveraging TLS, OpenSSL, UDP multicasting, code generation.	
Efficiam , Intern, Rust Software Developer	<i>Summer 2019</i>
Improved reliability of the market order matching engine and increased test coverage by over 40%. Introduced event-sourcing architecture and remodelled the Limit Order Book implementation after the QuantCup winner entry.	

education

University of Pisa , Computer Science courses	<i>Sept. 2019 - Feb. 2022</i>
Dropped out to join Edge & Node. Average grade: 28.35/30 ~ 94%. Relevant courses: Algorithms & Data Structures, Formal Logic cum laude, Programming I (C89) & II (OCaml, Java) cum laude, Computer Architecture (ARMv7), Operating Systems, others.	

LeadTheFuture.tech , Apprenticeship	<i>Sept. 2021 - Aug. 2022</i>
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miscellanea & projects

<ul style="list-style-type: none">FerrumFIX, a MIT-licensed Rust implementation of the FIX protocol.Zuloid, a competitive chess engine written in C99 with advanced optimizations e.g. null-move pruning and horizon effect reduction techniques.Knuth reward check of \$2.56.	<i>April 2016</i>
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relevant skills

<ul style="list-style-type: none">Proficient in Rust, Go, C, Elixir, Scala; comfortable with new languages.Strong focus on low-latency, high-throughput distributed systems.Familiar with<ul style="list-style-type: none">- GNU/Linux, Docker, Git, CI/CD, IaC (Terraform, Ansible), AWS & GCP main products.- PostgreSQL, Cassandra/ScyllaDB, SQLite, Redis, RocksDB.
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