Sergey Melnychuk

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Summary

Experienced and skilled software engineer, passionate about software architecture, domain-driven design, functional programming, large-scale distributed systems and machine learning, constantly pursuing self-improvement both personal and professional.

Skills

Design, Implementation & Operations of Large-Scale Distributed Systems
Advanced Data Structures and Algorithms, Performance Analysis & Optimisation
Problem Solving, Design Thinking, Technical Leadership, Team Leadership

Rust (3+ years) | Java, Scala (10 years) | C/C++/Go/Py/JS (2 years)
Cryptography, Blockchain/DLT, Solidity, EVM, WebAssembly
SQL / NoSQL, PostgreSQL, Cassandra, Spark, Kafka
DevOps, CI/CD, AWS, GCP, Docker, Kubernetes

Experience

05.2025 - 12.2025: career break
Work on health & gym goals (main: 200kg deadlift), and also Solenoid: EVM in Rust.

09.2022 - 05.2025: Eiger (Senior Software Engineer, Contract)
Lead Engineer, Beerus: light client for Starknet (Rust, WebAssembly)
https://github.com/eigerco/beerus
- Take over the project and resolve technical and architecture debts (significant rewrite)
- Design and implement iamgroot: a spec-based RPC client & server code generation
- Design and deliver seamless and effortless RPC spec upgrades using iamgroot tool
- Ensure project quality through CI, refactoring and improved functional tests coverage
- Design and implement core feature of the product: "stateless execution" of contracts
- Deliver WebAssembly library with light client functionality and deploy a demo page
- Technical leadership of a team of software engineers, communication to stakeholders
- Design, implement, test & deploy smart-contracts on Ethereum (hardhat, JS, Solidity)
- UI & UX design and implementation using vanilla JS / React / Vue / Svelte

Maintainer, Pathfinder: full node for Starknet (Rust, OpenRPC, SQLite)
https://github.com/eqlabs/pathfinder
- Design and implement RPC methods according to the Starknet OpenRPC spec
- Design and implement PoC block syncing engine with data storage & indexing
- Deliver PoC of a fast, compact and rebase-friendly block syncing implementation
- Participate in regression analysis, issues triage and code-review of pull-requests

04.2022 - 09.2022: Meta (Facebook) (Senior Software Engineer | L5, Full-Time)
Service Health (C++, Python, JavaScript, React, Rust)

06.2021 - 03.2022: Starburst Data (Senior Software Engineer, Full-Time)
Trino (https://github.com/trinodb/trino) (Java, Maven, GitHub)

11.2019 - 06.2021: Equinix (Staff Software Engineer, Full-Time)
Big Data Analytics, Internet of Things (Java, Scala, Akka, Kafka, Spark, AWS)

07.2018 - 10.2019: Google (Software Development Engineer | L4, Full-Time)
Autopilot: vertical & horizontal auto-scaler & resource manager (C++)
SaaS-accelerator: GCP service for managing SaaS deployments (Java, Go, GCP)

07.2014 - 07.2018: StrikeAd (acq. by Sizmek) (Senior Scala Developer, Full-Time)
RTB DSP development: high-load, big-data (Erlang, Scala, Java, Python, AWS)
Leading a cross-functional feature-team of up to 6 software engineers.

06.2013 - 06.2014: EPAM Systems (Senior Java Developer)
09.2012 - 06.2013: EngagePoint (Java Developer)
05.2011 - 09.2012: Infopulse (Java Developer)
02.2010 - 05.2011: Infopulse (Junior Java Developer)

Education

2010 - 2012: Master's Degree, Computer Science
2006 - 2010: Bachelor's Degree, Computer Science
NTUU "KPI", CAD / System Design (Kyiv, Ukraine)

Certifications

Zero-Knowledge Bootcamp (RareSkills, 2024)
zkSync zkEVM Bootcamp (Encode Club, 2024)
Cardano Blockchain Certified Associate (Cardano Academy, 2024)
Polkadot Blockchain Developer Bootcamp (Udemy, 2023)
Architecting with Google Kubernetes Engine (Google, 2022)
Reactive Architecture Specialization (Lightbend, 2021)
Functional Programming with Haskell (Stepic, 2020)
Apache Cassandra 3.x Developer Associate (Datastax, 2020)
Algorithms I & II by Robert Sedgewick (Princeton/Coursera, 2018)
Deep Learning Specialization by Andrew Ng (Coursera, 2018)
Functional Programming in Scala Specialization (EPFL/Coursera, 2018)
Oracle Certified Professional: Java SE 6 Programmer (Oracle, 2011)

Languages

English (fluent)
Polish (fluent)
Ukrainian (native)

etc

Personal technical blog.

Yet Another Key-Value DataBase: yakvdb
My tiny contribution to rust-lang: PR#72206
Advent of Code: 2020, 2021, 2022