

Yegor Polyakov

AI Agent Platform Engineer · Backend / Full-Stack

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A backend engineer from fintech, then a full-stack product builder. I built Imperia OS solo — an AI platform whose agents write the code, while I hold the requirements and the spec map. My strength is the hunger for “why”; the platform carries the “how.”

Independent · Imperia OS · 2025 – present

Building toward an AI assistant that takes the shape its user needs — and the platform that makes it possible.

The agents that build the platform are the same agents its users get — a friend, a domain specialist, a developer — assembled from domain modules. A module starts as business requirements that become a specification enforceably linked to the code: a change that answers to no requirement cannot land. The system’s knowledge lives in that map, not in a developer’s head.

State machines govern an agent’s turn, a workflow, a deploy. Every step is explicit — an LLM call or a deterministic operation — so a failure has a small blast radius: the trace names the step, and only what it touched replays.

An agent’s memory is history plus recall. As history grows, it folds into layered briefs, and the prompt stays within budget, with no layer repeating another. Recall surfaces what’s relevant by embedding match and places it in the context as hooks, not payloads — the agent pulls the full thing when it matters.

The whole system reduces to three abstractions: agents — everything that acts; blocks — everything addressable, one shape and one embedding; protocols — everything that crosses a boundary, with payment, signing and audit as decorators.

Platform stack: TypeScript · Node.js · Next.js · Rust · PostgreSQL · MongoDB · Kuzu graph · Redis · Claude Agent SDK · MCP

Full-Stack Engineer · Independent · 2022 – 2025

A cross-platform mobile platform on Flutter and AWS. Clean Architecture from the first commit, cloud infrastructure as code in AWS CDK.

Dart and Flutter on the frontend — feature-based modules, event-driven reactive layout, Riverpod for state. AWS Lambda in Go on the backend — DynamoDB with composite keys, S3 for media, Amplify and Cognito for auth.

Software Engineer · IBM · 2020 – 2022

Built a full testing environment and CI/CD pipeline for Hyperledger Fabric — feature delivery speed doubled. Refactored the project structure, cutting the codebase by 30%. Led the CouchDB→LevelDB migration that improved data-operation performance by 40%. Delivered a cross-channel encryption solution with zero defects, despite the absence of formal requirements.

Software Engineer · Insolar · 2019 – 2020

Designed the data architecture for a blockchain-based wallet, initiating the process and guiding a newly onboarded system architect through the key design decisions.

Software Engineer · Sber · 2018 – 2019

A custom CRUD-style abstraction layer over Hyperledger Fabric, self-initiated and built after hours. New-feature implementation dropped from around eight hours to fifteen minutes, simplifying composite-key data operations.

St. Petersburg State University, Mat-Mekh · 2012 – 2017

Mathematics and Mechanics faculty. Arrived from LNMO, the Saint Petersburg laboratory for continuous mathematical education. Olympiad medals along the way — mathematics at ICYS and the City Olympiad, computer science at the Baltic Scientific and Engineering Competition. Worked through university in parallel — Java, Android, Delphi, and embedded C++ for spectrograph instrumentation at a materials research institute.