

Sergei Udalov

Senior Backend Engineer · Ruby on Rails · Distributed Systems, APIs & AI/LLM

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Remote · CET/CEST timezone

SUMMARY

Senior backend software engineer with 20+ years building high-load, distributed systems and developer-facing APIs across e-commerce, fintech and billing. Core stack: Ruby on Rails, PostgreSQL, ClickHouse, Kafka, Redis, Kubernetes — plus production Go and early-career PHP/Symfony. I own work end-to-end, with measurable outcomes: 10x performance gains, payment and billing integrations (QIWI, PayPal, PerfectMoney, LaaS credit), and internal platforms used across teams. Beyond Ruby, building applied-AI expertise — LLM-powered features, RAG, and agentic workflows — shared via open-source projects, talks at RubyRussia and TechLead Conf, and the HeavyTech podcast; now focused on embedding AI into real products.

SKILLS

Languages: Ruby, Go, SQL, JavaScript, PHP, Kotlin, Java
Frameworks: Ruby on Rails, Symfony, Sinatra, Hanami, GraphQL, RSpec, Sidekiq
APIs & Async: REST, RPC, WebSockets, Apache Kafka, RabbitMQ, event-driven architecture
Data: PostgreSQL, ClickHouse, Redis, MySQL
Billing & Payments: QIWI, PayPal, PerfectMoney, usage/credit domain (LaaS), financial reporting
Reliability & Infra: Docker, Kubernetes, GitLab CI/CD, OpenTelemetry, Jaeger, Prometheus, Grafana, Keycloak
Architecture: Microservices, Domain-Driven Design, C4, Event Streaming, UML
AI/LLM: LLM integrations, RAG, embeddings & vector search, agentic workflows, tool use

EXPERIENCE

Lead Backend Engineer · Dixy

Nov 2025 — Present

Core backend for the Dixy mobile app: integrations, APIs, performance and delivery.

- Improved inventory synchronization 10x (20 min → 2 min) via ClickHouse→PostgreSQL migration, batch API-Hub integrations, and parallel incremental processing.
- Own cross-cutting backend changes end-to-end — requirements through production — for the systems-engineering team.
- Parallelized GitLab CI pipelines, removing cross-team build bottlenecks.
- Built an adapter layer routing notifications across Telegram, Mattermost and other channels.
- Standardized onboarding (DevContainers) and defined code-review criteria separating must-fix from recommendations.

Technical Lead · Raiffeisen Bank

Jul 2025 — Sep 2025

Banking infrastructure; three cross-functional teams.

- Established observability across services with OpenTelemetry and Jaeger.
- Drove one product's infrastructure migration to 80% completion; unified technical roadmapping and the technical-debt process across three teams.

Product Team Lead · Samokat.tech (ecom.tech)

Apr 2023 — Jun 2025

Scalable e-commerce platform (consumer apps); launched products from scratch.

- Launched 3 new products to production, owning backend architecture and delivery end-to-end.
- Built a Go service streaming Kafka events to WebSocket clients across web and mobile apps.
- Introduced Domain-Driven Design as the architectural baseline; established a technical-debt process across teams.

Senior Developer → Team Lead → Ruby Practice Lead · **Balance Platform**

Sep 2019 — Apr 2023

Lending-as-a-Service (LaaS) platform: credit automation, internal platform, Ruby standards.

- Built in the LaaS credit-automation domain; optimized core performance and SQL efficiency; led monolith→microservices extraction.
- Designed an internal RPC protocol and built the in-house "Core" framework used across service teams.
- Increased system throughput and reliability; built a ClickHouse analytics module and business-event collection for analytics.
- Wrote code-review guidelines, a Ruby competency matrix and a candidate-evaluation system; ran 10+ internal seminars.

Team Lead · **Soft Telematics**

Apr 2017 — Aug 2019

Nation-scale toll-road systems: Platon, Oboz, Kospro.

- Built admin interfaces and reporting for the Kospro payment system; extended the Oboz freight-document platform.
- Enhanced mobile application APIs; implemented automated testing and a reliable test-database pipeline across Platon modules.

Ruby Developer · **Source[Lab]**

Dec 2015 — Apr 2017

- Integrated the Idibu CV-advertising API with the Hiring Hub HR service; built a document-management system for ORAC (UK clients).
- Migrated projects from vendor-locked CI/CD (GitHub, Codeship, Heroku) to open-source GitLab CI and Dokku.

Ruby Developer · **SeoPult**

Mar 2014 — Dec 2015

Backend services and public APIs for an SEO platform.

- Built the internal backend core — Sidekiq workers, remote RPC, RESTful API — and sped up JSON/XML/text generation for fast API responses.
- Worked on a high-load HTTP crawler in Go with RPC access; integrated the QIWI payment system.

Ruby Developer · **Social Quantum**

Oct 2012 — Mar 2014

- Reworked the core system's RPC API; migrated PGQ workers to the new internal API.
- Built a QIWI payment gateway via REST and financial report generators.

Ruby Developer · **Undev.ru**

Aug 2011 — Oct 2012

- Built a payment-acceptance API integrating PayPal, PerfectMoney and other gateways; automated financial reporting with Google Analytics.

PHP / Ruby Developer · **HROS · High-Web · June Marketing · Sportweek**

2006 — 2011

- PHP/Symfony: online hotel-booking systems (HROS, High-Web). Ruby/Rails: 10+ e-commerce sites and in-house CMS (June Marketing); sports news portal with live broadcasts (Sportweek).

PROJECTS & PUBLICATIONS

- **HeavyTech Podcast** — host, covering AI/LLM engineering, system architecture, and backend patterns.
- **RubyRussia** 2023/2024/2025 — speaker on architecture, test automation, and database migrations.
- **Open-source AI projects** — LLM tool-use (Giga Chat CLI), RAG experiments, agentic workflows on GitHub.

EDUCATION

Moscow Aviation Institute (National Research University)

2008

Specialist degree in Applied Mathematics and Physics (comparable to Master's). Mathematician, Systems Programmer.

