Contact

+79626875925 (Mobile)
sergey.natalenko@mail.ru

www.linkedin.com/in/sergey-natalenko (LinkedIn)
t.me/need_free_time (Blog)
t.me/natalenko_sergey (Personal)

Top Skills

Product Scalability
High-Load Systems
Latency Optimization

Languages

English (Professional Working)

Sergey Natalenko

Hands-on Tech Lead | AI | Python & Go | Backend Reliability, Performance & Event-Driven Systems
Moscow, Moscow City, Russia

Summary

Hands-on tech lead working in Python and Go. My area is backend systems that have to behave predictably under load and during failures: event-driven services, third-party integrations, performance and reliability.What that has looked like in practice:- At EndRex I designed the architecture of a real-time trading platform and moved its exchange gateway and wallet-management service from Python to Go: zero-downtime releases, idempotent processing, up to 1,000 wallets per instance. Led a team of five.- At Kaspersky (KATA) I built an incremental build system driven by git diffs; PR builds went from about 60 minutes to 15.- At Alabuga I led the technical side of three teams, 21 people; the release cycle went from six weeks to two.- At InSperia, where I now head IT, we built an LMS from scratch that serves 10,000+ students, including a code judge that runs submissions in gVisor sandboxes.Between 2021 and 2024 I went through VK, MTS and Yandex to see how systems are built at scale. Since 2024 I take roles where I own the outcome: tech lead at Alabuga and EndRex, head of IT at InSperia.I stay in the code (20-30% of my time today) and own the result from architecture through production troubleshooting. I prefer decisions that can be checked: a benchmark or a failure test rather than an opinion.I write about backend engineering on Habr and maintain open-source projects, including asyncly, a library of typed HTTP clients with realistic integration-test servers.Open to backend tech lead and senior IC roles with real technical ownership, remote. Core stack: Python, Go, PostgreSQL, NATS, Kafka, RabbitMQ, Docker, Linux.

Experience

InSperia
Head of IT
December 2025 - Present (1 year)
Moscow City, Russia

Three products: an LMS (web, Android, iOS), a sales website, and an AI platform for customer operations. Two teams: backend, frontend, mobile, analysts, designers, DevOps, QA. Responsible for architecture, hiring and budget; 20-30% of my time in code.

— Launched the LMS from scratch: first courses in June 2026, 20+ courses and 10,000+ students by September.
— Code judge that runs student submissions in isolated sandboxes (Docker + gVisor): Python, C++, Java, C#, Pascal.
— About ten integrations (payments, video, CRM, messengers, external education platforms); TOTP and WebAuthn authentication.
— Replaced the WordPress sales site with React + Python; conversion doubled after the redesign and migration, and the site holds load better.
— Automated customer operations with AI: lead profiling, a churn model, an on-site chat widget.

Stack: Python 3.13, Litestar, SQLAlchemy 2 async, PostgreSQL 18, Redis, NATS + FastStream, MinIO, Docker, GitLab CI, Prometheus/Grafana/Loki, Sentry; React 19 / Next.js; Kotlin, Swift.

Endrex
1 year 10 months

Tech Lead
June 2025 - August 2026 (1 year 3 months)

Real-time services of a trading platform. Designed the architecture of all platform services (BFF, exchange gateway, wallet management, copy trading, analytics) and led their development. Led a team of five: two backend, frontend, QA, DevOps.

— Moved the exchange gateway and the wallet-management service from Python to Go: zero-downtime releases, idempotent processing, up to 1,000 wallets per instance.
— Led the Bybit integration for copy trading.
— Streaming data over NATS and WebSocket; profiling of critical paths; monitoring and structured logging.

Stack: Python, Go, Litestar, NATS, WebSocket, PostgreSQL, Docker.

Senior Backend Engineer (Python / Go)
November 2024 - June 2025 (8 months)

— Designed and introduced a new service architecture for the platform: better scalability, maintainability and component isolation.
— Built high-load real-time services in Python with Litestar, WebSocket and NATS.
— Raised automated test coverage of each service to 75%+ and set shared quality standards.

Stack: Python, Go, Litestar, NATS, WebSocket, Docker, PostgreSQL.

Лаборатория Касперского
Senior Software Engineer (Python / Go)
November 2024 - October 2025 (1 year)
Moscow City, Russia

Kaspersky Anti Targeted Attack Platform (KATA), Python/Go microservices.

— Built an incremental build system: affected Python packages and Docker images are derived from git changes, and only those are built and tested, with builds distributed over Docker Swarm. PR builds went from about 60 minutes to 15.
— Rewrote several services from Python to Go for the move to the web platform; maintained Go services.
— Introduced a unified code style, formatting and linting setup.

Stack: Python, Go, protobuf, PostgreSQL, Redis, NATS, Kafka, Docker, Docker Swarm.

Special Economic Zone "Alabuga"
Technical Lead
May 2024 - October 2024 (6 months)
Tatarstan, Russia

Internal web services. Technical lead for three development teams, 21 people: backend, frontend, QA, project managers, systems analysts.

— Owned the architecture of internal product services and the technical direction of the three teams; hired the teams and set up the workflow with the business side.
— Led the delivery of four web products: two analytics platforms, an internal merchandise store, and an employee rewards system.
— Release cycle went from six weeks to two by introducing Scrum and automating delivery.

— Set up GitLab CI/CD, Ansible-based deployments, and infrastructure monitoring with Prometheus and Grafana.
— Mentored two junior Python developers to middle level.

Stack: Python, GitLab CI/CD, Ansible, Docker, Linux, Prometheus, Grafana.

Yandex
Software Engineer
October 2023 - May 2024 (8 months)
St Petersburg, St Petersburg City, Russia

— Designed and built high-load REST APIs in Python/aiohttp handling more than 500 RPS.
— Developed asynchronous RabbitMQ and aio-pika event-processing services handling more than 3,000 EPS.
— Optimized PostgreSQL access and implemented scheduled data exports.
— Ran load tests and set up monitoring and alerting.
— Maintained high-load legacy services in Go.

Stack: Go, Python, aiohttp, aio-pika, PostgreSQL, RabbitMQ, Docker, Nginx, GitLab CI.

MTS Group
Lead Python Developer
March 2023 - October 2023 (8 months)
St Petersburg, St Petersburg City, Russia

— Designed and developed scalable backend services in Python and FastAPI.
— Built ETL pipelines for PostgreSQL, MySQL, OracleDB, and HDFS using PySpark and Onetl.
— Added pytest coverage and contributed to CI/CD pipelines.

Stack: Python, FastAPI, Celery, SQLAlchemy, PySpark, Onetl, pytest, PostgreSQL, MySQL, OracleDB, HDFS, Docker.

VK
Python Developer
February 2022 - March 2023 (1 year 2 months)
Saint Petersburg, St Petersburg City, Russia

— Developed backend services for Mail.ru media products in Python and Django and translated stakeholder needs into technical requirements.
— Refactored legacy applications and migrated web services to Kubernetes.

— Added unittest coverage and mentored junior developers.

Stack: Python, Django, MySQL, Redis, Memcached, Celery, Docker, Kubernetes, Nginx, Grafana.

KPMG Russia
Software Engineer
August 2021 - February 2022 (7 months)
St Petersburg, St Petersburg City, Russia

Designed and developed analytics, forecasting, and data-collection services; designed PostgreSQL and MongoDB schemas and set up CI/CD and automated tests.

Stack: Python, Django, FastAPI, Pydantic, NumPy, PostgreSQL, MongoDB, Docker, Azure DevOps, Nginx.

InSperia
Full-stack Python Developer
August 2020 - February 2022 (1 year 7 months)
St Petersburg, St Petersburg City, Russia

Built an LMS from scratch to automate teacher and student workflows and integrate with GetCourse and Stepik. Developed learning analytics services and dashboards and contributed to an ERP platform for the online school.

Stack: Python, Flask, Django, PostgreSQL, Docker, Nginx, Kubernetes.

Education

Университет "Синергия"
Doctor of Philosophy - PhD, Mathematical, statistical and instrumental methods in economics · (September 2024 - June 2027)

ITMO University
Master of Technology - MTech, Computer Programming · (2021 - 2023)

National mineral resources university (University of mines)
Bachelor's degree, Systems Engineering · (2017 - 2021)