

# ALEKSANDR SENKEVICH

Senior Software Engineer · Tech Lead · Backend & AI Systems

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[LinkedIn](#) | [GitHub](#) | [katelabs.io](https://katelabs.io)



Senior Software Engineer and Tech Lead with 10+ years building high-load, data-heavy backend systems in fintech, crypto, retail and automotive. Domain Owner for Parts Management at Rivian, where I act as the architectural reference for several teams across hundreds of microservices. I ship AI into production rather than demos: built and run katelabs, a real-time LLM pipeline that has scored 230,000 crypto headlines and trades the resulting signal live on Binance, with every trade published. Strong in system design, performance work and the trade-offs that keep large systems maintainable.

## TECHNICAL SKILLS

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**Languages:** TypeScript, JavaScript, Go, SQL

**Backend & architecture:** Node.js (NestJS), Go services, GraphQL federation (federated schemas, Cosmo Router, Apollo), REST, event-driven architecture (Redpanda/Kafka, NATS), Temporal workflows, WebSockets, microservices, monorepos, system design and architecture

**Data & AI:** PostgreSQL (internals, performance, HA), Redis, Elasticsearch, MongoDB, MSSQL; LLM pipelines in production, AI agent orchestration (Mastra AI Studio), AI-assisted engineering (Claude, Devin, custom skills, large-context integrations), statistics and applied maths, quantitative research and backtesting tooling

**Infrastructure:** AWS (EKS, Lambda), Kubernetes, Docker, Argo CD, GitLab pipelines, automated infrastructure pipelines, observability (Argus), on-call incident response, cost optimisation

**Frontend:** React, Redux, React Native, Vue (led a company-wide frontend expert team)

**Leadership:** Leading cross-team initiatives, mentoring to promotion, deep domain ownership and a habit of understanding the problem before the solution

## EXPERIENCE

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### Rivian Automotive

Belgrade, Serbia (remote)

Senior Software Engineer

May 2024 – present

- Domain Owner for Parts Management: own the architecture of hundreds of microservices for parts logistics and spare-parts analytics, and serve as the architectural reference for several engineering teams.
- Migrated the entire event-driven architecture of the Parts domain to Redpanda (Kafka-compatible), replacing the legacy messaging layer across the domain's services without downtime.
- Own the domain's federated GraphQL schemas (Cosmo Router) and take part in the on-call rotation, handling production incidents end to end.
- Led the Warranty & Returns project from first architecture to production, automating the collection and sorting of defective parts and cutting technician workload and case processing time.
- Designed and shipped the VIN-printing system, removing manual steps and shortening vehicle delivery cycles.
- Re-architected production services and modernised CI/CD pipelines, reducing AWS operating costs and improving infrastructure performance.
- Mentor senior engineers on architecture and career growth; several mentees have been promoted.

### katelabs (formerly Quant Lambda)

katelabs.io

Founder & Engineer, independent research project

Oct 2024 – present

- Built and operate a real-time LLM pipeline (Go, TypeScript, PostgreSQL) that scores every English-language crypto headline within minutes of publication: 230,000 headlines from 109 sources, stored point-in-time with no look-ahead, plus a per-coin news index served via API.
- Published research across 37 coins on how news tone and volume lead price, and a live trading record on Binance spot in which 32 of the first 34 real trades matched the simulator one-to-one. In partnership talks with data vendors and trading platforms.

### Playrix

Belgrade, Serbia

Expert Team Lead / Senior Software Engineer

Jan 2022 – May 2024

- Led the Frontend Expert Team, unifying the tech stack and architectural standards across all product teams and reducing time-to-market for new services.

- Designed two generations of the company-wide React UI library, cutting frontend development cost across products.
- Contributed to 15+ services as lead expert, driving cross-team architectural decisions and scalability improvements.

## Trinity

Senior Software Engineer / Tech Lead

Moscow, Russia

Dec 2020 – Jan 2022

- First engineer and later team lead: defined the backend architecture and system design for a React Native retail platform integrating sales, inventory and 1C accounting in one application.
- Product scaled to commercial clients and was subsequently acquired by a major retail chain.

## City Entertainment Ticketing, LLC

Senior Software Engineer (full-stack)

Moscow, Russia

Jul 2020 – Dec 2020

- Returned to lead the build of a high-load live-streaming platform during COVID-19, serving thousands of concurrent paying viewers with real-time interactive features.

## kari (retail chain)

Tech Lead

Yekaterinburg, Russia

Feb 2019 – Jul 2020

- Designed a workforce forecasting model and a real-time shift management system that optimised staff schedules and reduced labour costs.
- Launched a B2B partner marketplace centralising inventory analytics and procurement.

## Hiero Technologies

Senior Software Engineer / Tech Lead

Moscow, Russia

May 2018 – Feb 2019

- Architected an investment platform MVP with a proprietary Bitcoin and Ethereum payment gateway; led a team of four engineers.

## City Entertainment Ticketing, LLC

Software Engineer (full-stack)

Moscow, Russia

Aug 2017 – May 2018

- Engineered a distributed master-replica server architecture and a custom 2D seat-selection widget (Canvas/PixiJS) for concert halls, cutting latency and improving conversion.

## Smirnov Batteries, LLC

Software Engineer (full-stack)

Yekaterinburg, Russia

May 2015 – Feb 2017

- Developed internal logistics and inventory management software that streamlined warehouse operations.

## EDUCATION

### Ural Federal University (UrFU)

Mathematics and Computer Science

Yekaterinburg, Russia

2013 – 2017