Ivan Blinov

Data & AI Platform Engineer · Tech Lead

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Remote · Americas (UTC−3 to UTC−6)

SUMMARY

Hands-on tech lead with 12 years in software, including 3+ years managing engineers (teams of up to 20). I build data platforms where numbers must be right to the cent — billing and settlements data for millions of sellers on one of the largest marketplaces in Eurasia, 100+ TB — and the AI-agent infrastructure that lets a small team run them safely. I verify critical logic with formal methods and build products from zero, most recently as co-founder and CTO of a Brazilian health-tech startup.

SELECTED RESULTS

- Built the AI platform of a 12-engineer data team: an MCP server with 100+ tools over 15 systems, an autonomous on-call agent and an agentic merge-request reviewer (benchmark: 6 of 7 reference findings vs ~2.5 for diff-only LLM review; first production run: 15 findings, zero false positives), all under a 21-ADR security architecture.
- Root-caused a ClickHouse 23.8 global-lock bottleneck behind seller-portal timeouts, benchmarked three versions and redesigned the query path for ~5x throughput.
- Raced an int32 overflow across ClickHouse, Greenplum and PostgreSQL. Product IDs were at 93.5% of the 32-bit range and growing by up to 20 million a day. Three ClickHouse clusters were migrated in a week, and 4.7 TB of partitioned PostgreSQL tables copied into 64-bit twins under a WAL budget. Five live functions that would have failed first were found in time.
- Built BendKV with a team of AI coding agents in twelve days: a Redis-compatible server whose core is formally verified against 68 laws, passing 1,769 of Redis's 1,812 own tests. Differential testing independently found nine bugs in Redis and Valkey. The same methods applied to production billing surfaced 42 findings.
- Grew an engineering team from 6 to 20 (MDF AG); hired 20 engineers and formed three project teams (Netfactory).

EXPERIENCE

Wildberries (RWB)

Moscow, Russia

Tech Lead, Data Engineering — Seller Balance — Jan 2024 – present

Hands-on lead (architecture, design and code review, implementation) of a 12-engineer team that owns billing and settlements data for millions of sellers: tariffs, logistics and storage fees, acquiring, compensations, contract documents. Greenplum (~100 TB), ClickHouse, PostgreSQL, Kafka, Airflow; Russia and Georgia.

- Lead the Iceberg-on-S3 lakehouse pilot for the Seller Balance data organization (petabyte-scale target). Ran the data team's production Spark job unchanged on Iceberg; wrote 11 ADRs; established reader compatibility across Spark, Trino and ClickHouse, exactly-once Kafka ingestion and DR drills.
- Root-caused a global-lock bottleneck in ClickHouse 23.8 under portal load (~58K lock acquisitions/s per node), proved the upstream fix was absent in our version and redesigned the query path for ~5x throughput.
- Led the RCA of a PostgreSQL out-of-memory failover cascade; the fix reworked the memory configuration and hardware sizing.
- Led the six-month migration from Microsoft SQL Server to Greenplum and ClickHouse; moved a 12.7 TB ClickHouse cluster between datacenters; drive a fleet-wide int-to-bigint key migration ahead of ID overflow, including copying multi-terabyte partitioned tables under a WAL budget.
- Designing cross-datacenter disaster recovery for the Greenplum warehouse: measured ~40 TB/day of WAL and evaluated five replication strategies.
- Built the team's AI platform:
  - MCP server with 100+ tools, read/write annotations and tool allowlists;
  - autonomous on-call agent;
  - agentic MR reviewer with a Postgres job queue, GitLab CI integration and an egress-allowlisted sandbox;
  - personal read-only database roles for the whole team.
- Ran a formal-methods pilot for billing that links executable specifications to Go and SQL code; 42 findings in calculation, versioning and synchronization logic.
- Built a Go service from scratch to production on three Kubernetes clusters (OpenAPI, Vault, CI/CD, load testing); founded the team's internal web app and handed it over to the team; automated contract-document generation.
- Introduced mandatory merge-request approvals; ~100 review assignments a year; designed the stocks data architecture for the Georgia rollout.

Senior Data Engineer — Jul – Dec 2023

- Refactored the supplier reporting API (Python, FastAPI, asyncio, ClickHouse), added tests and moved its cache to Redis Sentinel for high availability; built Airflow and Kafka pipelines (Kafka Connect, Debezium) for the DataOps platform.

Groupsi — Brazil

Co-founder & CTO (part-time) — Jan 2026 – present

Online group therapy for school and university students, live with real users.

- Built the product end to end: React Native (Expo), React, Fastify, Prisma/PostgreSQL, Redis, self-hosted LiveKit video; LGPD consent tracking and audit logging.
- Designed and applied an Azure production platform in Terraform: landing zone across eight subscriptions, Entra ID, controlled egress, managed identities; planned the GCP-to-Azure cutover with no security-control regressions.
- Run an AI-native engineering process: coding agents implement through pull requests, a second agent coordinates and verifies, six automated review seats in CI. About 950 commits and 450+ pull requests in ten months.

MDF AG — Zürich, Switzerland

Engineering Manager — Jul 2021 – Dec 2022

- Grew a cross-functional engineering team from 6 to 20: hiring, delivery process, feedback and conflict resolution.
- Led portfolio-monitoring systems combining blockchain and exchange data for investment risk analysis; built trade-execution tooling; redesigned the backtesting engine with NumPy and Numba for a 100x speedup.

Netfactory — Moscow region, Russia

Engineering Team Lead — Oct 2019 – Jun 2021

- Led a 10-engineer team delivering a data-analysis platform for Russia's Federal State Statistics Service (billions of records, hundreds of users); took an API billing product from zero to delivery with a team of five; hired 20 engineers and formed three project teams.

Sketchfab — Paris, France

Back End Developer — Jan – Sep 2019

- Python/Django backend for 4M active users: database tuning, caching, rate limiting, asynchronous processing; incident response with Datadog.

Smartbank — Moscow region, Russia

Full Stack Developer — Mar 2017 – Dec 2018

- Built a B2B SaaS from scratch for bank–business workflows: government registry integrations, OCR, qualified electronic signatures; led a small remote team.

Self-employed — Paris, France

Full Stack Developer — 2014 – 2017

- Built web products from scratch: marketplace, news aggregator, data parsers, chatbots.

OPEN SOURCE AND RESEARCH

- **BendKV** — Redis-compatible server in Bend2 with a formally verified core: 68 laws checked by Bend and by a kernel proved sound in Lean; passes 1,769 of Redis 7.2.16's 1,812 own tests; differential testing against Redis independently found nine bugs in Redis and Valkey, several since fixed upstream.
- **heilbronn-triangle-bounds** — conditional Heilbronn triangle bounds in Lean with exact certificates.
- **Open Kernel Challenge 2026** — LLM inference kernels on NVIDIA H200 (FP4 MoE, attention, fused decode layer); final standings November 2026.

SKILLS

- **Data:** Greenplum, ClickHouse, PostgreSQL, Kafka, Airflow, Spark, Trino, Iceberg, Hive Metastore, S3; data modeling, performance tuning, migrations, disaster recovery.
- **Languages:** Python, Go, SQL, TypeScript; earlier Java, PHP.
- **AI engineering:** MCP servers, coding agents (Claude Code, Codex, OpenCode), agent orchestration and evaluation, LLM gateways, agent security.
- **Infrastructure:** Kubernetes, Docker, Terraform, Azure, GCP, AWS, GitLab CI, GitHub Actions, Vault, Grafana.
- **Correctness:** TLA+, Dafny, Z3, Lean; property-based, differential and mutation testing.
- **Leadership:** architecture and ADRs, design and code review, hiring, team scaling, incident RCA.

EDUCATION

- 42 — Digital Technologies Architect, 2017–2022
- Moscow Open Institute — Bachelor's degree, Project Management, 2017–2025
- Sorbonne Université — Classics and Classical Languages, 2015–2017
- Oracle Certified Associate, Java SE 8 Programmer

LANGUAGES

Russian — native · English, French, Spanish — full professional proficiency · Portuguese — professional working proficiency