

Konstantin Gredeskoul

Principal/Staff Software Engineer

Startup CTO (4x), Tech Leadership, Team Building
Conference Speaker, Open Source Contributor

Results-driven professional with expertise in scaling solutions and delivering exponential value through strategic optimization. Committed to continuous learning and leveraging emerging technologies, including AI, to solve complex challenges and drive innovation. Focused on high-impact initiatives that transform business outcomes.

SUMMARY

Passionate problem-solver with a Mathematics background, I tackle engineering challenges through creativity, logic, and rigorous methodology. Whether collaborating or working independently, I prioritize clean, maintainable code and deliver robust solutions iteratively - always with comprehensive test coverage to support rapid product evolution.

I excel at reducing risk through strategic approaches like gradual rollouts, A/B testing, and dogfooding, while simultaneously improving developer experience. My initiatives consistently accelerate team velocity by streamlining setup processes, optimizing CI build times, and reducing deployment friction. When systems break, I leverage observability tools and architectural analysis for rapid diagnostics. Strong communication skills, resulting in detailed specifications and translating complex technical insights for engineers, PMs, executives, and customers alike. Building consensus and aligning priorities across diverse teams is central to the success in any organization.

CAREER HIGHLIGHTS

Transformational technical leader with two decades of architecting scalable systems that served millions. Four-time CTO, [led complete system rewrite \(90K LOC Java → 10K LOC Rails in 2 months\)](#), subsequently scaled the Ruby platform 100x with 6 engineers, while maintaining 99.99% uptime. At another company, prevented extended PostgreSQL downtime due to transaction wraparound on a 27TB PostgreSQL table. Prolific open source contributor with [200M+ Ruby Gem downloads](#), proving deep technical expertise that extends far beyond any single company. As a passionate learner, enjoys collaborating, brainstorming, and managed to recognize the value of AI as a co-pair programmer (Copilot, Claude) quite early, spreading the skills relentlessly among other engineers.

Proven track record solving complex problems:

Architected one of the largest distributed email platforms of its time, led zero-downtime PostgreSQL migrations with simultaneous cloud vendor changes, and achieved 100% uptime during critical ACA open enrollment (handling 10x traffic spikes). Built fault-tolerant systems supporting 25 million active users with near-zero emergency pages. [Introduced transformative engineering practices](#)—full-time pair programming, TDD, stand-ups, retrospectives—creating self-managing, ultra-efficient, and very high-performing teams.

Industry thought leader:

With 250K+ conference presentation views on topics from "[DevOps without the Ops](#)" to [advanced PostgreSQL scaling](#). Co-created original Ruby rules for Bazel mono-repo builds, inspiring current industry standards. Consistently delivered 2-3x performance improvements across development environments, CI builds, and cost optimization while building inspiring engineering culture and hiring top talent, including Forbes Under 30 honorees.

Creative problem-solver:

Bridging the product, engineering, and operations through exceptional communication and deep technical expertise. From preventing transaction wraparound disasters to implementing comprehensive observability strategies and mentoring underrepresented minorities in Rails bootcamps—delivers scalable results that remain maintainable and adaptable.

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EDUCATION

Monash University, Australia

**Bachelor of Science w/Honors
Mathematics & Statistics**
Summa Cum Laude, Top 1%
[Published Graduate Thesis](#)



Kharkov State University, Ukraine

**Advanced Mathematics,
Calculus & Analysis**

**Ukraine National Mathematics
Olympiad Winner**



SKILL PROFICIENCY

Systems Thinking, Architecture



Scaling Up, Lowering Latency



PostgreSQL, Data Modelling



DevOps (Chef, Terraform/Grunt)



Ruby, Ruby on Rails, E-Commerce



Unices, BASH/ZSH, IPCs



C (99) / C++ (2011)



Security & Cloud Deployments



AI Prompt Engineering



TypeScript, Node, JS (ECMA'19)



ReactJS, JSX



ML, Deep Learning, Neural Nets



Python / Python 3



PROFESSIONAL EXPERIENCE



Academia.edu, **Staff Software Engineer**

08/2024 — present

Halved CI build times (15→7 mins, ran 100's of times a day) via introducing Knapsack, CI/CD image build automation with Terraform & AWS CodeBuild that included all ruby and javascript dependencies. Built a one-command dev environment setup, cutting onboarding from weeks to hours. Diagnosed problematic practices, and led overhaul of Datadog metrics strategy, authoring an open-source Ruby gem for custom metric validation—showcasing cross-team leadership and community impact. Taught the team about Ruby Concurrency, and redesigned & delivered card expiration warning email system.



HealthSherpa, **Principal Software Engineer**

02/2022 — 03/2024

Identified and systematically eliminated single points of failure across backend systems, enabling HealthSherpa to achieve its first-ever 100% uptime during open enrollment—a critical milestone for a platform serving over 2/3 of ACA-eligible Americans when traffic spikes 10x overnight to 100K requests per minute. I streamlined developer onboarding from nearly a week down to one hour through comprehensive automation, and replaced our fragmented observability system with a unified Datadog implementation that delivered actionable insights into performance bottlenecks and system reliability. Beyond the infrastructure work, I contributed to team knowledge through nearly ten internal technical presentations covering Ruby concurrency, PostgreSQL optimization, and scalability patterns.



FOSSA, **Staff Software Engineer**

09/2020 — 09/2021

Averted catastrophic XID wraparound on a 27TB PostgreSQL DB by migrating to multi-AZ RDS and completing emergency vacuum under 2-month deadline. Cut AWS costs, compacted DB schema, and added unique job support to Faktory's NodeJS client—mastering TypeScript/Kubernetes to deliver production-grade features fast.



Coinbase, **Staff Software Engineer (L6)**

06/2019 — 02/2020

Unified Ruby & Go into a Bazel mono-repo, creating the first open-source **rules_ruby** for Bazel, to enable hermetic Ruby builds/tests. Pioneered Bazel support for Ruby using Starlark, laying the groundwork for the current **Bazel/Ruby** integration that currently is part of Bazel Contrib. Was placed into developer productivity infrastructure group, which wasn't the position I interviewed for, and I wasn't able to negotiate a better placement that utilizes my skillset.



Homebase, **Infrastructure Architect**

08/2017 — 01/2019

Stepped in during critical instability caused by daily peak traffic, leading cross-functional efforts that restored 99.99% uptime through strategic DB read/write splitting (Makara) and system hardening. Spearheaded full AWS infrastructure rebuild using Chef and Docker, cutting cloud spend by 50%. Drove major Ruby performance gains (3x memory reduction, optimized GC/concurrency), introduced zero-downtime deploys, and accelerated CI by 2-3x. Empowered a high-performing team and built systems that let them sleep soundly again, and could be scaled another 10x without rewrites.



Wanelo.com, **CTO & VPE**

12/2011 — 01/2016

Joined as employee #3 and built the Engineering team from scratch to 25 employees. Collaborated with the founding engineers in rewriting the entire app in Rails. With 6 engineers, we rebuilt it in 2 months, creating 10x less code than Java, and 99% test coverage. Over the following six month, **traffic jumped 100x**.

Established CI/CD, TDD, continuous deployment, and pairing culture. Conducted over 1K interviews, and had just one person leave in 3.5 years. Invented a new distributed design pattern based on HAProxy for routing and auto-recovery—featured in my RubyConf talk "**DevOps Without the Ops**."

The application reached top-10 Apple Store rankings multiple times, won **TechCrunch Disrupt**, and handled 10K requests/second through heavily optimized multi-threaded Puma processes running on Joyent Cloud.

INTERESTING PROJECTS

This sidebar features several open source projects that demonstrate a wide range of skills, while at the same time showing the code I wrote in the past, proving the ability to deliver and finish a project, whether it's an MVP, an online free tool, or a game.

gomoku-ansi-c (3 ★)

ANSI Terminal game with a pretty strong AI player that you can play on a MacOS.

simple-feed (334 ★)

Redis-based implementation of social feeds (bare bones version of Twitter)

cmake-project-template (923 ★)

bashmatic (163 ★)

sym (138 ★)

<https://makeabox.io>

Free online tool for creating vector drawings for laser-cutting 3D enclosures.

<https://tickets.fnf.org>

Rails site for several local music communities, which is used to purchase tickets, parking permits, camping fees, etc. Uses Stripe for billing.

CONSULTING

Between 2015 and 2020 I did a lot of consulting through the newly founded company ReinventONE <https://reinvent.one>.

The contracts typically involved work towards better scalability, performance of the web apps, distributed architecture, event-driven architecture, and more.

The clients included:

- Flow Tech Services
- HIRED.com
- JoinHomebase.com
- Reflektive, Inc
- Returnly.com
- GoShippo, Inc.

SPOKEN LANGUAGES

- ENGLISH
- RUSSIAN
- SPANISH (Beginner)

REFERENCES

Available on request