

Konstantin Gredeskoul

RUBY • RAILS • BASH • JAVA • C/C++ • POSTGRESQL • DEVOPS • SCALE • SECURITY
DISTRIBUTED SYSTEMS • SOLID/OO DESIGN • MENTORSHIP • PAIRING • #LOVES2CODE

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PROFICIENCY

Ruby (& Rails)
● ● ● ● ● ● ● ● ● ●

C/C++
● ● ● ● ● ● ● ○ ○ ○

OO DESIGN
● ● ● ● ● ● ● ● ● ●

DATABASES & SQL
● ● ● ● ● ● ● ● ● ●

BASH
● ● ● ● ● ● ● ● ○

DEVOPS
● ● ● ● ● ● ● ● ○

BAZEL / GOLANG
● ● ● ● ○ ○ ○ ○ ○ ○

SUMMARY

Konstantin is a passionate, creative, intuitive thinker, who loves an efficient software design, clean and well-tested code, who spreads his enthusiasm to the rest of the team, while inspiring the pursuit of mastery of the software craft, all while getting a ton of stuff done along the way.

Besides being an avid ruby expert, Konstantin served as CTO at four separate companies. Over the last decade he built four large e-commerce sites, two of which are also socially connected e-commerce marketplaces (Wanelo and Blurb), with all the typical complexities.

He loves the challenge of scaling distributed systems: during his tenure at Wanelo, the Rails-powered app reached peak traffic of 200,000 RPMs, with an average latency of 80ms, fully satisfying the young and impatient teenage audience.

Big on open-source, he authored over forty open source libraries in **Ruby**, **C/C++**, **CMake**, **Arduino**, **Bazel** and **BASH**. His Ruby gems have been downloaded over [20 million](#) times, while his [online presentations](#) have been viewed by over 250K people worldwide. Konstantin often speaks at conferences, including [RubyConf Australia in 2015](#).

Besides his love for coding, Konstantin has a passion for building hyper-productive and deeply collaborative engineering teams comprised from diverse backgrounds, and harnessing the incredible power of pair-programming, TDD, collaborative brainstorming, DevOps automation, and continuous deployment. He also writes a technical blog "[kig.re](#)".

PROFESSIONAL EXPERIENCE

ANGELLIST, Principal Software Engineer

• 3/2020 — 6/2020

Infrastructure and platform work on improving site performance, metrics, DataDog integration, test coverage, test suite speed, thread safety, developer tooling, configuration management the enormous legacy **Rails 5.1** application. Part of the team that manages a **Kubernetes** cluster, **Terraform** deployment on AWS, and **DataDog monitoring**.

COINBASE, Senior Software Engineer

• 6/2019 — 1/2020

Extended the **Bazel Build System** using **Starlark** programming language (a subset of Python) to support Ruby language as a member of Developer Productivity team. The resulting is an open source project available on [Github](#).

EDUCATION



1993 — 1995

Monash University,
Melbourne, Australia

Bachelor of Science (Honors)
Mathematics & Statistics



1992 — 1993

Kharkov State University,
Ukraine

Mathematics
and Advanced Calculus

INTERESTS

Open Source Software

Electronics / PCB

Laser Cutting

Arduino / ESP8266

Drumming

Guitar

Piano

Electronic Music

DJ (House / Tech-House)
as ["LeftCtrl"](#)

Produced two albums as
["PolyGroovers"](#)

Whitewater Kayaking

Bicycling

FLOW TECH SERVICES, DevOps Automation

• 12/2018 — 5/2019

Six-months contract with a fin-tech startup in VC fund management space.

- Built a complete cloud automation from scratch using **Chef Enterprise on AWS**, and following all AWS security guidelines. Provisioned multiple environments (dev, staging, production) in EC2.
- Installed Ruby linked with **jemalloc**, and deployed **Rails/AngularJS** application using Capistrano.
- Registered all server processes such as **Puma** and **Sidekiq** as SystemD services, with constrained resources using cgroups.
- Configured self-hosted **HAproxy**, **Redis**, **Memcached**, **Nginx**, with only **PostgreSQL** being hosted on RDS, resulting in significant savings.
- Setup a secure, resilient and fault-tolerant infrastructure that was able to handle a multitude of systems failures and server crashes with no detectable impact to users.
- In addition to working on the infrastructure, I introduced the engineering team to the **Pivotal Process**, points estimation, retrospectives, and led the first several sprint planners. The process was later adopted and resulted in an increased team productivity, better awareness and morale.

HOMEBASE, Infrastructure Architect

• 8/2017 — 12/2018

Conceived and lead a massive revamp of Homebase's systems architecture and deployment for the next generation of growth. Initially, I was brought in as a contractor to help address scaling pains. After a couple of months I was offered to switch to full-time employment (which I did, as I really liked the team) to continue my work on addressing the performance issues and infrastructure automation. During that time:

- Introduced a number of significant resilience improvements, achieving 99.99% uptime in only a couple of months. Utilized multiple **PostgreSQL** read replicas to improve performance and stability, using **Makara** gem.
- Built out infrastructure automation using **Chef Enterprise and Docker** on Ubuntu, integrating with AWS services such as RDS, S3, SNS and EC2. Reduced AWS costs by 2X by switching to self-managed **Redis & Memcached**, consolidating app servers onto reserved instances.
- Tuned Ruby garbage collection parameters and built Ruby interpreter with **jemalloc**, thus reducing memory footprint by 3X.
- Tuned concurrency settings of **Puma** and **Sidekiq** for maximum throughput while minimizing the number of involuntary context switches.
- Rebuilt deploy process using **Capistrano**, managing a non-downtime deploy in just under 60 seconds.
- After rebuilding the Production, Staging and multiple Dev environments, focused on **reducing CI build times by 2-3X** using aggressive caching and smart retries.
- Finally, rebuilt the developer tooling (initial setup, secrets encryption, deployment) in **BASH** v4.

SELECT OPEN SOURCE PROJECTS

All projects listed below are open source and distributed under the MIT license.

Simple Feed (Ruby Gem)

Redis-backed activity feed implementation that scales to millions of users, optimized for constant rendering-time of the feed

Sym (Ruby Gem, CLI)

Symmetric encryption library based on OpenSSL, supports password-protected symmetric keys

MakeABox.io

Rails-based one-page site for generating PDF templates aimed at a laser-cutter, that generate enclosure boxes with sides that snap onto one another

Arli (Ruby Gem, CLI)

Ruby-based CLI tool for automatically downloading and installing Arduino Libraries into an Arduino project, that works somewhat similar to Bundler

CMake Project Template

A popular template for C/C++ projects that comes with automated tests using gtest library

Bashmatic

A collection of over 500 BASH helpers for all walks of life

LANGUAGES

English (Fluent)

Russian (Fluent)

Spanish (Beginner)

WANELO, Chief Technical Officer / VPE

• 12/2011 — 1/2016

I joined the company as an employee #3, after the Founder, and her sister. Working at two jobs for a couple of weeks, I threw myself into fixing site's chronic outages caused by its own popularity, and lack of performance-oriented design of Wanelo's first codebase. After applying some amount of ingenious CDN caching with Fastly gave us a few months of breathing room, I focused on establishing high-performance engineering practices with the newly formed engineering team.

- Closely following the Pivotal Process, my team agreed (reluctantly, at first) to try full-time pair-programming, in addition to more familiar practices of continuous integration, daily deployments, and TDD. In just under two months that followed, with the team of six (myself included), we replaced the old Java app – 90K lines of code and no tests – with a compact Rails app – only 10K LOC, half of which were tests. We then brought the new app live, migrated the data from MySQL to PostgreSQL, and swapped Cloud vendors all at the same time... with just one hour of planned downtime for maintenance. [Full story here.](#)
- Automated cloud deployment with Chef, strategically providing automated tests with all Chef recipes. Used HAProxy as a routing layer as well as the resilience mechanism for fail-over. This architecture was the subject of my RubyConf OZ talk "[DevOps without the Ops](#)".
- Stack: Ruby, jRuby, Rails, PostgreSQL, Redis, the proxy, Nginx, haproxy, ElasticSearch, Solr, Memcached, Chef, Capistrano, Joyent Cloud, SmartOS, dTrace, Objective-C, iOS.

Professional experience between 1995 and 2011 is available upon request.
They are also listed on my [LinkedIn Profile](#).

REFERENCES

"I have worked with Konstantin and can say he is bar-none the most technically minded CTO and leader I have ever worked with. He has an amazing depth in system turning, scaling distributed architectures, ruby programming, and database tuning.

His biggest contribution, though, was building a super well-oiled engineering team that is the dictionary definition of efficient, lean and driving a fully automated deployment infrastructure, and enforcing best practices such as TDD in a pairing environment.

Overall Konstantin is a super passionate and creative technologist, and a leader, and he would be a great asset to any team that wants to build an amazing tech org. I would fully work with him again in a heart beat."

Matthew Camuto
Hands-On Startup CTO, SW Architect
Reported to Konstantin @ Wanelo

"As a CTO Konstantin puts great focus in developing a healthy engineering culture that extends outside his organization. He is able to build and lead extremely efficient teams by focusing on team success and empowerment.

Konstantin not only has formidable CTO skills, but is also a superb engineer. He is constantly refining his preferred stack to increase productivity and scalability. He is one of the brightest people I have ever met. He is a swift thinker and is able to come up to speed and give invaluable feedback. He uses all those skills to lead his team into success."

Richard Millan
Engineering Leader
Reported to Konstantin @ Wanelo

Additional references are available upon request, as well as on my [LinkedIn](#).