

# Konstantin Gredeskoul

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## Summary

I am a highly passionate software engineer with twenty-five years of commercial software development across many languages, frameworks, and IDEs. I excelled as a technical leader and served as a CTO at four different companies. I've always remained hands-on delivering hundreds of thousands of lines in C, Java, Ruby, Ruby on Rails, JavaScript, and BASH. As an avid open source contributor and Ruby expert and mentor, I released **45 Ruby Gems** which have been downloaded **10,852,381** times as of May 1st, 2019. As a frequent conference speaker, I published 6 SlideShare presentations, which now have over 200,000 total views.

Throughout my career, my focus has always been on improving efficiency and investing into mastery of the software craft — in myself, and my team. I never stop learning, and I truly believe that software engineering is a lifelong passion. I built several high-throughput distributed systems with fault-tolerant and self-healing architecture, resulting in **99.99% uptime** year after year while sustaining **10,000 requests per second** with only **100ms latency** to Ruby on Rails (v4.1) backend stack in 2012 (Wanelo). I've introduced 100% infrastructure automation to at least five different companies and helped many of my consulting clients with issues related to scalability, security, and site reliability engineering.

I am highly motivated and passionate about collaborative software development through pair-programming, code-reviews, TDD, CI/CD pipelines, dashboards. I am the Destroyer of the Technical Debt, protector of the Software Design Realm. I am a rather impatient developer, and I cannot stand doing manual tasks that can be easily automated. As a result, I've built tooling for an unattended install of the dev environments in my spare time, collapsing 35 manual steps into one.

Unlike most engineers, I love documenting code, from README to embedded YardDoc. When facing the choice — whether to do something right or quick and sloppy, I choose the "right" way nearly every time. It's a very deliberate choice, and it doesn't work all the time, and so I am looking to join a team with the engineering culture which values active **COLLABORATION, HONESTY, MATURITY, RESPECT, and MASTERY** of the software craft.

Where I truly shine — is mentorship. Pair me up with your Junior Ruby/Rails programmers, and watch their level go up in a matter of hours. True story. And I literally LOVE doing that.

## Education

### Monash University, Melbourne, Australia

Honors Degree of Bachelor of Science, with major in Abstract Mathematics and Statistics.

- Deans list of academic excellence two years in a row.
- Australian Statistics Society scholarship
- Completed three-year study in two years.

### Kharkov State University, Ukraine

BSc, Mathematics and Advanced Calculus (1991 – 1992)

## Expert Proficiency

- Ruby and Ruby on Rails (14 years), RSpec, MiniTest, Sinatra, Capistrano, Devise, etc
- ANSI C (20 years), C++11, Arduino, Teensy, ESP32, hardware programming
- DevOps — Chef, Docker, BASH, AWS, GoogleCloud, VPN, Cisco firewalls
- Java programming (6 years), JavaScript (ECMA6), TypeScript
- BASH v4 programming using taps for testing
- Expert-level object oriented design, SOLID principles
- Deep expertise with PostgreSQL (since 2005!), advanced SQL, and database tuning
- Finding and fixing performance bottlenecks in distributed applications
- UNIX systems programming. Contributor to bash-it.
- Process improvements: Agile, CI, CD, pairing, TDD, BDD, Retrospectives, Planners.

## Recent Contract/Consulting Experience

Year	Period	Company	Project	Stack
2017	May-July	Returnly.com	Helped write demonized process in Ruby for processing AWS Kinesis queue stream.	Ruby 2.5.3 RSpec Kinesis
	March	Open Source	<b>Sym</b> — symmetric encryption open source tool (CLI) and Ruby API gem for encrypting application secrets in a seamless way. <a href="https://git.io/vyouE">https://git.io/vyouE</a>	Ruby 2.3.3/2.4.0 RSpec, OpenSSL
	January	Open Source	<b>SimpleFeed</b> — social activity feed library based on Redis backend and sorted set data type. <a href="https://git.io/vyflt">https://git.io/vyflt</a>	Ruby 2.3.3/2.4.0 RSpec, Redis
2016	April – September	GoShippo.com	Deployment automation for dockerized application. Automate build settings, secrets management, and environment management. Sped up deploys from 30mins to 17secs.	Ruby 2.3, Docker, Capistrano, RSpec, OpenSSL, AWS
	February — March	Hired.com	Speeding up raw performance of hired.com. Made 2X improvement.	Ruby 2, Rails 4, PostgreSQL, Heroku
	January	Innit.com	Analysis of the internal and external data models, inception and task breakdown of import app	PostgreSQL, XML, JSON
	January — February	GoShippo.com	Tooling for developers to get fully setup with latest dev tools for Python, and a Docker-based application.	Python, ruby, bash
2015	December	TryButter.com	Product inception, estimation, task breakdown, MVP definition and timeline estimation.,	

# Full-Time Employment and Education Overview

## Systems Architect at Flow Tech Services, LLC

November 2018 — April 2019 (6 months)

## Platform Architect at Homebase

August 2017 – November 2018 (1.5 years)

## CTO at Wanelo.com

February 2012 – November 2015 (4 years)

## DOE at ModCloth.com

August 2010 – February 2012 (1 year 7 months)

## CTO at Drop In Media LLC

September 2008 – September 2010 (2 years 1 month)

## CTO at Infectious.com

June 2007 — May 2009 (2 years)

## Principal Web Engineer, Blurb

March 2006 – June 2007 (1 year 4 months)

## Senior Software Engineer, RedSeal Systems

September 2005 — March 2006 (6 months), San Mateo

## Systems Architect, Topica Inc

March 1998 – August 2006 (7 years), San Francisco, USA

## Software Engineer at National Rails Corp, Australia

April 1995 – June 1996 (1 year 3 months)

## Consultant at CyberSource Pty Ltd (Australia)

November 1994 – November 1995 (1 year)

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## Volunteer Experience

### Mentor at RailsBridge (Women in Tech)

January 2012, 2013

### Mentor, Judge at IncubaUC, Santiago, Chile

September 2015 – Present

## Selected Work Experience in Detail

### Systems Architect at Flow Tech Services, LLC

November 2018 — April 2019 (6 months)

I worked with a small team at Flow on their infrastructure. As I joined the team, there was no automated testing, no CI, the deploy process could only be done by one person, and so on. It was a Rails API backend with Angular JS front-end. My goal was to build from scratch their infrastructure "the right way": we used Chef Enterprise on AWS, and following all security guidelines I was responsible for provisioning multiple environments (dev, staging, production), using only Chef on EC2. I chose to use Ubuntu nodes, and whenever a new node was added Chef installed Ruby with jemalloc, deployed our application using Capistrano (using localhost deploy), registered Ruby's services such as Puma and Sidekiq as SystemD services, and introduced nginx, haproxy, Redis and Memcached into the mix, while still relying on RDS for PostgreSQL.

In just under three months, entirely by myself, I was able

to build out a world-class secure, resilient and fault-tolerant systems architecture using haproxy and DNS failover to handle failures. I signed up and configured DataDog and NewRelic monitoring and alerting of all operations, created dashboards and Slack alerts.

Besides working on the infrastructure, I introduced the young engineering team to the XP Agile Process with point estimation and led the first few PivotalTracker-based planners. The process was adopted and resulted in better communication and faster feature delivery.

After the infrastructure project I took on technical debt of the primary Rails API backend, accomplishing the following: test coverage went up from 0% to 62%, integrated tests with CircleCI workflows, wrote unit and controller tests and created reusable shared examples, wrote developer setup scripts in BASH, and introduced secrets encryption into the workflow.

## Platform Architect at Homebase

August 2017 – November 2018 (1 year, 4 months)

Revamped Homebase's systems architecture for the next generation of scale. I joined the team initially as a contractor, and then, after a couple of months, as a full-time employee, to work on addressing the performance issues and growing pains Homebase was going through at the time. I was able to introduce a number of significant performance improvements, reaching uptime of 99.99% in only a couple of months. I accomplished this by introducing multiple PostgreSQL replicas and distributing

the app load across them, as well as rebuilding the infrastructure using Chef Enterprise and Docker on Ubuntu, wrangling AWS services such as RDS, S3, SNS, and EC2, optimizing our Ruby, Rails stack to work well with Redis, PostgreSQL and Memcached, all while deploying many times daily with Capistrano. Also responsible for reducing CI build times by 2X with CircleCI, and Docker-based parallelism. Built out the developer tooling (setup, secrets encryption, deployment) in the (nearly object-oriented) BASH v4, while open-sourcing the core library at <https://github.com/kigster/bashmatic>

## CTO at Simbi.com

October 2016 - March 2017 (5 months)

Simbi is building a symbiotic economy marketplace, where you can find, use and learn the quirkiest and unusual things. I joined the company shortly after their YC round of financing and focused on streamlining and formalizing product development process. We were able to reduce friction by switching to Pivotal Tracker, improve code quality with more attention on automated testing and continuous integration. I helped guide the team towards a more modular software architecture while personally focusing on increasing operational transparency of the production environment through real-time monitoring and intelligent alerting.

I contributed an open source library that supported the "Activity Feeds" feature on the site — where the relevant events are shown in a chronological order. The library is based on Redis, and ensures constant access time for reading and rendering the feeds.

I managed the team with 1-1s, and hired talented engineer(s) into the team, while striving to create a truly collaborative engineering culture despite cultural and time-zone differences with an outsourced dev team.

## CTO at Wanelo.com

February 2012 - November 2015 (3 years 9 months)

I joined the company right after Deena's (CEO, and a Founder) initial seed round. Working at two jobs for a couple of weeks, I jumped into fixing site's continuous outages caused by its own popularity and lack of performance-oriented thinking in the first prototype codebase. After applying sufficient amount of "duct tape" allowed the company a few months of breathing room, I focused on establishing high-performance engineering practices within the newly formed team. Closely following the Pivotal Process, my team agreed 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, we replaced the old Java app – 90K lines of code, no tests – with a compact Rails app – 10K LOC including tests. We then brought live the new application, migrated data from

MySQL to PostgreSQL, and swapped Cloud vendors all at the same time. With just one hour of planned maintenance. Full story: <http://bit.ly/ONeXPb>

From the very beginning our cloud infrastructure is 100% automated with Chef (enterprise), and most of the software is covered by the automated tests. These two practices, introduced from the beginning enabled the company to avoid having to hire a dedicated Operations or QA teams. Cloud and CDN resources are now provisioned and configured by the developers, across a range of technologies and vendors. See the following presentation at RubyConf Australia 2015: <http://www.slideshare.net/kigster/dev-ops-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, Android, scaling, automation.

## Director of Engineering at ModCloth.com

August 2010 - February 2012 (1 year 6 months)

ModCloth.com is an online clothing, accessories, and decor retailer recently featured as #2 fastest growing American company in the Inc 500 magazine <http://bit.ly/8ZGrur>

My role combined both technical leadership as well as management of a 20+ person development team. Additionally, responsible for directing the company from

monolithic application towards SOA, helping the team adopt Solr search engine, automate deployment, and many other higher-level initiatives such as test-driven development with continuous integration, paired programming, short and frequent release cycles, migration to the cloud, and zero downtime releases.

**Stack:** RoR, MySQL, PostgreSQL, Capistrano, Redis, Memcached, RSpec, SmartOS/Solaris

## CTO & Founder at Drop In Media LLC

September 2008 - September 2010 (2 years)

Industry: SMS/MMS, billing, premium messaging, carrier relations, carrier application development.

In-house developed enterprise platform supported high volume SMS/MMS messaging, plug-in architecture for business logic, as well as billing and routing functionality similar to that of an SMS aggregator.

Bootstrapped company part time in 2004, later transitioned into a full-time CTO role. In charge of all internal IT, Operations, Development, QA, technical integrations, evaluations, support for business development and marketing initiatives, as well as hiring and managing an internationally distributed team of developers for a company of about 10 people.

**Stack:** Java 1.6, Hibernate, Spring, JUnit, Linux, PostgreSQL 8 and 9

## CTO at Infectious.com

June 2007 - May 2009 (2 years)

Infectious is an art community plus an online store, with a crowd-sourced content model built around modern art printed on adhesive vinyl. All aspects of technology, from operations, IT,

engineering and hiring. Infectious.com Inc employed about 10 people.

**Stack:** RoR, PostgreSQL, RSpec, Capistrano, Linux

## Principal Engineer, Web Development at Blurb.com

March 2006 - June 2007 (1 year 3 months)

Lead Blurb's web team (four-five people team) in launching one of the first e-commerce applications on Ruby on Rails in 2006, in under four months, including data migration from the prototype.

Together with my team learnt Ruby and RoR. Blurb.com received a Webby Award in 2007.

**Stack:** RoR, PostgreSQL, Java 1.6, Hibernate, Spring

## Senior Software Developer at RedSeal Systems Inc

September 2005 - March 2006 (6 months)

Designed two-tier plug-in framework to support a variety of devices and communication protocols (SSH, FTP, SCP), as well as the threat database lookup library.

**Stack:** Java, Hibernate, PostgreSQL, Spring Framework, RMI, Client/server, Swing, XML/XSD.

## Systems Architect at Topica.com

April 1998 - August 2005 (7 years 4 months)

Industry: email list management software, marking automation, ESP (email service provider). Built a very large distributed application running across 50+ nodes (owned hardware), on top of a sharded multi-database architecture, with a web GUI based on Apache/mod\_perl and perl5.

Topica was responsible for sending over 200M email messages per day in 2001, which at the time represented nearly 1% of all daily Internet email.

**Stack:** Oracle 8i, BEA Tuxedo, Perl5, Perl/XS, C, Apache, mod\_perl, XML, Java, Hibernate, Verity, gcc, gdb, make, Linux.

# LinkedIn Recommendations



**Matthew Camuto, Sr. Software Engineer, was managed by Konstantin at Wanelo.com**

"I have worked with Konstantin and can say he is bar-none the most technically minded CTO and leader I have worked with. He has an amazing depth in system turning, scaling architectures and 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 creating technologist and leader and 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 heartbeat. "

**Marcy Swenson, Executive Coach, StartupHappiness.com, was an executive coach to Konstantin:**

"Over and over, I've seen Konstantin focus not only on technical architecture & excellence, but on growing the people on his team. He continually works to hone his team's best practices, with the goal of making his team & company an incredible place to work. Whether it's carefully preparing to deliver actionable feedback, or charting next steps on career paths, or matching passions & skills with projects, Konstantin is relentlessly striving to help his team grow, and his company thrive."

**Richard Millan, Engineering Lead, Wanelo.com:**

"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. I have enjoyed working with him so much that I worked with him at three different companies!"

**Matt Levy, Senior Software Engineer, Topica, Inc.:**

"There are those people who you work with that will forever be a positive influence on your professional life. Konstantin is one of those people. Not only is he the must have person you want on your team when tackling the Big Problem, but he makes it seem easy and does it with grace. His skill in technology is only matched by his skill as a musician. A leader for the digital renaissance age."

**Tony Rose, CEO & Co-Founder at Drop In Media LLC:**

"Konstantin codes faster than lightning. I feel extremely lucky to have worked with Konstantin at Drop in Media. His skills with software architecture, development and team leadership is invaluable. He has a keen mind and a sharp intellect which he proves time and again while tackling difficult problems. His most valuable asset is his motivation and drive which is an inspiration and ensures the job gets finished."

**Tim Roberts, CEO & Founder, Infectious.com, Inc.:**

"It goes without saying that Konstantin is a talented engineer with deep expertise in a broad range of technologies. He built the foundation of Infectious and did everything technical we needed. He was a swiss army knife CTO who was hands on and great at getting stuff done. But he is more than a great technologist. He has incredibly good product sensibility, an eye for well-designed UI and passion for creating quality. He contributed heavily to the strategy with a very pragmatic approach, balancing business needs and technical vision. Konstantin is a solid leader and I look forward to working with him again in the future."

**Ariel Poler, CEO & Founder, Topica, Inc**

"Konstantin is a brilliant systems architect. He always found the fastest and most elegant approach to solve our technical challenges. He was a pillar at Topica and fundamental to many of our achievements. I hope I get to work with Konstantin again in the future..."