

DENNIS KRASNOV

BACKEND SOFTWARE ENGINEER

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EDUCATION

Bachelor of Computer Science
University of Waterloo
2018 - 2023

LANGUAGES

Java, Kotlin, Spring
Go, NodeJS, Python
HTML, CSS, JS, React
Dart, Flutter
Rust, C

TECHNOLOGIES

REST, GraphQL, gRPC
Kafka, Temporal, NATS
PostgreSQL, Redis, Firebase
Linux, Docker, Kubernetes

ARCHITECTURE

Object-Oriented, Functional
Event-Driven, Microservices
Domain-Driven Design

SKILLS

Full-Stack Development
Diagrams, Documentation
Test-Driven Development
User Experience Design
English, French

INTERESTS

Powerlifting
Nutrition
Samoyed Dogs

WORK

Backend Software Engineer | *Dapper Labs* | May 2022 - Aug 2022

- Identified 3 unnecessary layers in microservice design, created POC using Hasura, avoided over 1000 lines of boilerplate while creating a new service
- Added complex query to listings endpoint, implemented join and kick endpoints for squads service, wrote Go client library for an internal queueing API

Full-Stack Software Engineer | *WFHomie* | May 2021 - Aug 2021

- Created fault-tolerant shipping label generator using NodeJS, Postgres, Canada Post API. Automation slashed typical order processing labor from 55h to 2h
- Introduced Rx-based React state management to decouple UI from DB code
- Invented and championed new design for onboarding flow which resolved 12 backlog tickets. Project became the company-wide priority for two sprints

Backend Software Developer | *CGI* | Jan 2021 - Apr 2021

- Migrated Spring queue processor service from RabbitMQ to Solace PubSub+
- Configured resilient Consul services using templated systemd on RHEL servers

Backend Software Engineer | *Ultimate Software* | Sep 2019 - Dec 2019

- Developed OAuth2 authorization microservices in identity platform team
- Added permissions claim to JWT on critical-path ForgeRock identity gateway serving 51M users, refactored to prevent zero-trust authorization recursion
- Uncovered an architectural issue in the event sourcing write model which breaks future compatibility, documented and presented solution to the team

Freelance Software Developer | *Krasnov Tech* | Jul 2016 - Aug 2019

- Acquired customers, gathered requirements, managed customer expectations
- Planned, designed, developed, released, and maintained following products:
- sgbiotec.com – store selling lab-grade fluorescent proteins; React, Shopify API
- Pocket Trade Show – marketplace platform for salesmen; PHP, MySQL, AWS S3

PROJECTS

Uringy | Async runtime for Rust based on *io_uring*

- Library for writing concurrent applications with non-blocking IO syscalls
- Uringy can handle 115k HTTP request/sec on one thread, 14x faster than Express
- Rust, io_uring, Linux, thread-per-core architecture, synchronization primitives

Neural Network Driving | Autonomous car simulation

- Built reinforcement learning algorithm and driving physics engine from scratch
- Won gold at Canada-Wide Science Fair, shortlisted for Intel International Science Fair, presented to Justin Trudeau at invite-only PM's Science Fair
- Java, JavaFX, artificial neural network, neuroevolution, multi-threading