

# 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  
Docker, Kubernetes, Terraform  
Linux, Networking, io\_uring

## SKILLS

Gathering Requirements  
Domain-Driven Design  
Diagrams, Documentation  
Test-Driven Development  
English, French

## INTERESTS

Bodybuilding  
Nutrition  
Samoyed Dogs

## WORK

### Backend Software Engineer Intern | *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 Intern | *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 Engineer Intern | *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 Intern | *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** | *Rust Library for Structured Concurrency and non-Blocking IO*

- Schedules virtual threads in userspace, batches zero copy syscalls with io\_uring
- Extremely performant, handles 115k HTTP requests/sec, 14x faster than NodeJS

### **Diet Driven** | *Calorie counter mobile app and backend*

- Tracks daily calories. Validated idea with target users, UX usability testing
- Live data subscriptions with reactive UI and event-driven architecture

### **Neural Network Driving** | *Autonomous Car Artificial Intelligence*

- Trains simulated car AI using reinforcement learning. Visualized in real-time
- Won gold at Canada-Wide Science Fair, personally presented to Justin Trudeau