

# HUGO KLEPSCH

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## WORK EXPERIENCE

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### Arctic Wolf Networks

Senior Developer

Waterloo, ON

January 2023 - Present

Member of technical staff

May 2018 - August 2018, January 2019 - August 2019, July 2020 - December 2023

- Controlled schema chaos by integrating a schema registry into *the* huge, ownerless, moneymaking, everything-data pipeline
- Developed many streaming ETL (Extract, Transform, Load) pipelines while integrating hundreds of security-related data sources (Identity providers, firewalls, DHCP/DNS/NTP/email/Domain servers, antivirus/endpoint/user software, network scanners etc)
- Worked with internal and external customers to bring a product from concept to adoption: User interviews, product concept development, requirements gathering, design-implementation-iteration, usability studies, adoption strategy development
- Used Esper, Apache Flink and Hadoop as part of a CEP (Complex Event Processing) pipeline to find patterns in an unbounded series of real-time events
- Lead design and implementation of auto-scaling microservices supporting over 11 million messages per second
- Integrated new functionality without downtime into a data analysis pipeline processing 1 trillion messages per day

## EDUCATION

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### University of Guelph

B.Comp. Software Engineering (Co-op), Honours. Marketing minor

Guelph, ON

September 2015 - April 2020

- Dr. Mary McLeish Scholarship recipient (Highest GPA in Software engineering major)
- 2018 Braithwaite Business Scholarship
- Dean's Honours list

## PERSONAL PROJECTS

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### Maintainer of

caddy-dns/linode,

HugoKlepsch/libdns-linode

August 2025-Present

- Implements connector to Linode DNS nameserver API so that the Caddywebserver can automatically complete DNS-01 ACME challenges

### HugoKlepsch/Go-Snake

June 2021

- Created "Snake" AI to battle other snakes in battle-royale snake competition
- Won 1st in Platinum league out of hundreds of other competitors
- Various versions used Dijkstra and A\* path-finding algorithms to optimize food intake
- Used Minimax algorithm to find game moves with highest chance of success

## VOLUNTEER HISTORY

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### Mentor, programming teacher and alumni

FIRST Robotics Competition (FRC) team 2200

Burlington, ON

September 2013 – Present

- Practical experience modeling and implementing effective control algorithms for robot mechanisms including: arms, elevators, flywheels, holonomic and differential drive platforms
- Used PID + Feed-forward closed-loop control, OpenCV computer vision, trapezoidal motion profiling, Bézier curve path following for autonomous control of robot
- Used encoders, potentiometers, limit switches, line followers, LiDAR, ultrasonic rangefinders & cameras as sensor data for control algorithms
- Captured & annotated training data, fine-tuned YoloV8 and deployed real-time object detection (bounding boxes) model to TensorRT platform
- Taught high-school students about control flow, program structure, git & the above

## TECHNICAL STRENGTHS

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### Computer Languages

Python, Go, Java, C/C++, Bash, Node.js

### Tools & Tech

Linux, Git, Docker, K8s, Prometheus metrics, Command-line tools, Kafka, Avro, Hazelcast, Flink, Esper, Hadoop, Redis, PostgreSQL, Elasticsearch, AWS-{S3, SQS, Lambda, ElastiCache, CloudFormation, CloudWatch, EC2, ECS, ECR, EMR, GuardDuty, Athena}, CUDA, OpenCV, TensorRT, FreeCAD, OnShape, UML, RabbitMQ, AI developer aids (ex: Claude Code), Vim, L<sup>A</sup>T<sub>E</sub>X

### Development Practices

Agile: {Scrum, Spiral}, Waterfall, DevOps, CI/CD, AI developer aids, Test Driven Development, Risk management, Technical reviews, Quality assurance