

Kyle Haugen

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Software Engineer & Team Lead with expertise in cloud-based machine learning infrastructure, data pipelines, and security-focused development. Proven ability to optimize performance, reduce costs, and lead teams to deliver scalable solutions in AWS.

EXPERIENCE

Software Engineer | Team Lead, CARFAX – London, ON March 2024 – Present

Tech stack: Java, MongoDB, AWS, Linux | **Methodologies:** Scrum, TDD, Pair Programming

- Developing a kubernetes-based machine learning platform on AWS to host internal models with lineage tracking, high availability, tenant isolation, and security.
- Managing a critical, proprietary data scraping engine leveraging computer vision, machine learning models, and serverless computing.
- Extending internal machine learning infrastructure in AWS for models hosted in SageMaker, secured with API Gateway, VPC, and IAM and managed with Terraform.
- Successfully ported the entire scraping engine from AWS SageMaker to the new proprietary machine learning platform, serving as a proof of viability for the platform.
- Onboarded the first three internal customers to the machine learning platform, streamlining integrations to accelerate adoption.
- Introduced the concept of 'document families' in the data scraping engine to enable lineage tracking for related documents using DynamoDB for persistent storage with fast reads.

Associate Software Engineer, CARFAX – London, ON May 2021 – March 2024

- Contributed to the development of a multi-tiered data ingestion pipeline for normalizing accident data for the Vehicle History Report product – a flagship product used by millions of customers.
- Rewrote team Terraform scripts to enhance modularity and maintainability.
- Designed and deployed an internal tool in Go to automate a third-party audit process, increasing QA team throughput by 20%.
- Spearheaded the design and delivery of a reliable hybrid-cloud system using AWS, providing a single entry point to the team's ETL process.
- Implemented a custom de-duplication process, saving \$100,000+ annually in processing fees.

Professor - Cyber Security, Fanshawe College – London, ON Sept 2023 – Dec 2023

- Taught two sections of *SRTY1021 – Cyber Security* within the School of Information Technology.
- Delivered instruction covering security concepts, threat analysis, malware investigation, and incident response simulations.

PROJECTS

Kerberos Authentication Protocol Implementation in Go - [Github](#)

- Developed a client-server application emulating the Kerberos authentication protocol to deepen understanding of secure authentication mechanisms such as ticketing and encryption techniques.

EDUCATION/CERTIFICATIONS

BSc – Specialization in Computer Science, Western University – London, ON 2023

Diploma – Business, Fanshawe College - Lawrence Kinlin School of Business – London, ON 2017

Security+, CompTIA Information Technology (IT) Certifications & Training Sept 2022

SKILLS SUMMARY

Programming: Java, Groovy, Go, Python, Bash

Technologies: Linux, MongoDB, SQL Databases, JUnit, Mockito, Kubernetes

DevOps & Cloud: AWS, Terraform, Docker, Gradle, Git, Jenkins, Gitlab Pipelines