

LEWIS DIAMOND

B.Eng, Computer Engineering

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PROFESSIONAL SUMMARY

Seasoned software engineer with over a decade of experience building scalable distributed systems, leading teams and delivering innovative solutions. Expertise in cloud-native and hybrid development, high-performance systems and machine learning infrastructure. Proven track record of mentoring, technical leadership and open-source contributions.

PROFESSIONAL EXPERIENCE

Amazon.com / AWS, Software Engineer, 2020-present

Technologies used: Kubernetes, TypeScript, Go, Java, DynamoDB, SQS

AWS - EKS:

- Developed and operated the service responsible for OS updates of over two million hosts
- Led major re-architecture of globally distributed applications
- Improved CVE patching times from months down to 14 days (7 days for critical)
- Restructured build infrastructure to improve stability and deployment speed

AWS - EKS-anywhere:

- Created a Kubernetes manifest cryptographic signature verification system
- Designed and developed an add-ons system for EKS-A with full lifecycle management
- Developed Kubernetes operators
- Contributed to open-source software

Amazon.com:

- Developed software to optimize cross-border product availability
- Addressed critical performance bottlenecks
- Promoted modern development best practices

Jogogo, 2017-2020

(Startup with ~30 employees and 5M in funding)

Chief Technology Officer, 2019-2020

Lead Architect, 2017-2019

Technologies: Node, Rust, Cassandra, Kafka, MQTT, Kubernetes

- Led the company's software development team (~20 devs/managers) to build its core technology
- Mentored developers and recruited new talent
- Designed a highly scalable distributed indoor location analytics system handling >100,000 msg/s
- Developed core components for near-real-time analytics
- Led the development of a camera-based location analytics solution as a response to COVID-19 lockdown
- Built ML/AI development infrastructure on Kubernetes
- Oversaw the development of ML classifiers used for accurate triangulation
- Integrated trained models into the core analytics processing engine
- Built a flexible data processing pipeline using Rust and Node
- Developed an embedded WiFi/BLE sniffer based on Arch Linux
- Led the development of a high-throughput WiFi and BLE data aggregation system (Rust)

Chopchop.io, Founder, 2014-2017

Technologies: Node, Python, React, ArangoDB

- Designed and developed a React.js restaurant recommendation web application
- Created a graph-based recommendation engine using ArangoDB and JavaScript
- Wrote REST services in Python and JavaScript

- Deployed services to production on AWS using Linux Containers

Diamond Consulting, Founder, 2012-present

Expedia, 2013-2014:

Technologies: Java, Cassandra

- Contributed to the design and development of Expedia's new geographic information system based on Cassandra
- Created REST APIs, designed and implemented big data schemas and multi-threaded applications
- Reviewed code and promoted development best-practices
- Led the migration from Perforce to Git

Morgan Stanley, 2012-2013:

- Developed a new generation post-trade processing software
- Led the development of Interest Rate Swaps execution report processing
- Improved architecture through several major core refactorings

Morgan Stanley, Software Developer, 2010-2011

Technologies: Java, C++

- Managed a small team during a 4-week sprint project.
- Implemented a replacement for internal directory search which improving lookup times by >10x
- Owned, managed, and developed an application used to automate new account approval and regulations enforcement
- Developed a testing framework for data-centric unit tests
- Performed technical interviews from new grads to senior developers

Early career

Genetec, Embedded & Full-stack Software Developer, 2008-2009

Verint, Embedded Software Developer, 2007-2008

Technologies: C++, C#, JS, SQL, Linux, TCL/TK

EXPERTISE

Languages: TypeScript, Rust, Go, JavaScript, Java, Python, C++

Ops: Linux, Kubernetes, Kafka, MQTT, Prometheus, Grafana

Databases: Cassandra, PostgreSQL/MySQL/SQLite, ScyllaDB, ArangoDB, RocksDB

ML/AI: Pandas, NumPY, scikit-learn, Jupyter/Zeppelin, AutoGluon

OPENSOURCE

EKS/EKS-Anywhere: under <https://github.com/aws>

stromjs: A dependency-free stream utility library. Lodash for streams <https://github.com/lewisdiamond/stromjs>

rms: WIP - A fast email indexer with a command-line interface, written in Rust <https://github.com/lewisdiamond/rms>

EDUCATION

Université de Sherbrooke, Sherbrooke

Bachelor's degree in Computer Engineering

St-Lawrence College, Quebec

Diploma of College studies in pure and applied science