

# JAY LIM

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## SUMMARY

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- Experienced with site reliability, infrastructure and performance.
- Go, Java, JavaScript, C; Linux, Docker, Kubernetes.

## WORK EXPERIENCE

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**Cockroach Labs** – Member of Technical Staff Sept 2021 – current  
*Cloud/Serverless (Go)* Toronto, ON

- Designed and built a system to migrate live connections between SQL processes transparently, and implemented tenant load rebalancing on the proxy layer.

**Hudson River Trading** – Wintern Jan – Apr 2021  
*Systems Infrastructure (Go, C, Python)* - file systems, eBPF Remote (Canada)

**Cockroach Labs** – Software Engineering Intern (incl. part-time) May – Dec 2020  
*Cloud/Serverless (Go)* Remote (Canada)

- Worked on multi-tenant CockroachDB on CockroachCloud, and designed a low-latency suspend/resume mechanism for database instances on Kubernetes.

**Shopify** – Production Engineering Intern (incl. part-time) Sept 2019 – Apr 2020  
*Performance, Edge Infrastructure (Ruby, Lua, Go)* Remote (Canada)

- Designed and built an on-demand requests profiling system that involves the edge network.
- Implemented a dynamic web application firewall system in NGINX.
- Researched on a checkout queuing system that aims to support fairness and provide high throughput while throttling requests – built a queuing simulator, explored various queuing algorithms, and performed load testing.

**Cockroach Labs** – Software Engineering Intern May – Aug 2019  
*Cloud/SRE (Go)* New York, NY

- Designed and built a black-box monitoring system for a geo-distributed SQL database.
- Automated multi-region Kubernetes cluster creation and deletion on AWS and GCP.

**Mozilla** – Desktop Firefox Engineering Intern May – July 2018  
*Performance (JavaScript, C++)* Toronto, ON

- Diagnosed performance problems for about:newtab via profiling and research.
- Reduced 64% of memory usage for about:newtab pages by sending blobs instead of DataURLs over IPC.
- Stored JS bytecode in startup cache to preload scripts, reducing overall about:newtab page load times by 18%.

**Shopify** – Production Engineering Intern Jan – Apr 2018  
*Core, Service Communication (Go, Ruby)* Ottawa, ON

- Leveraged MySQL binlog streaming to build a real-time database corruption detector.
- Worked on a trace processing pipeline, and built a system to visualize service graphs.

**Horizons School of Technology** – Junior Software Engineering Instructor May – Aug 2017  
*Web Development (JavaScript)* San Francisco, CA

## EDUCATION

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**University of Waterloo** Sept 2016 – Aug 2021  
Bachelor of Computer Science (Co-op) **GPA: 3.98/4.00, Cumulative Average: 94.1/100**

- Relevant Coursework: Compiler Construction, Distributed Systems, and Programming for Performance.