

Howard McLauchlan

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SUMMARY

Languages C++, C, Python, Haskell, Go
Interests Systems, Infrastructure

EXPERIENCE

Google Software Engineer - Ads Infrastructure *Jun 2019 - Present*

MemSQL, Software Engineering Intern - Storage & Ingest *Sep 2018 - Dec 2018*

- Implemented incremental backup/restore, decreasing backup duration by 99%+ for key customers
- Optimized JSON parsing to improve data ingest speed and robustness

Facebook, Software Engineering Intern - Linux Kernel *Jan 2018 - Apr 2018*

- Contributed patches [upstream](#) for btrfs, bpf/tracing, and other subsystems
- Added targeted fault injection tool to [BCC](#), causing erroneous return on specified runtime conditions
- Implemented chatr support for incremental send/receive in btrfs send stream V2
- Optimized btrfs free space tree bitmap conversion, decreasing execution time by 20-33%

NVIDIA, Software Engineering Intern - Cloud *Apr 2017 - Aug 2017*

- Modified [Docker Registry](#) fork to enable dynamic storage driver instantiation backed by a configurable cache, reducing AWS costs by an estimated 50-75% while maintaining request latency
- Designed, managed, and deployed a Certificate Authority hierarchy to enable secure communication between the NVIDIA GPU Cloud back-end and over 300 GPU nodes

NVIDIA, Software Engineering Intern - Web *Aug 2016 - Dec 2016*

- Led the initial development of [compute.nvidia.com](#)
- Developed services to facilitate data exchange between Quay and the NVIDIA GPU Cloud back-end
- Extended Log4j functionality to provide thread specific data through WebSockets for use with Kibana

MILQ, Software Engineering Intern - Web *Jan 2016 - Apr 2016*

- Began migration from the existing front-end stack for [milq.com](#) to the React ecosystem
- Created a suite of ES6 React tools, including a drag and drop interface with infinite scrolling

PROJECTS

Joos1W Compiler *Academic, Jan 2019 - Apr 2019*

- A compiler for Joos1W, a fairly large subset of Java, to i386 assembly

EDUCATION

University of Waterloo, Bachelor of Software Engineering; with distinction *2014 - 2019*