
Employment

Senior Software Engineer **Dropbox** **August 2022 – Current**

- Build and maintain the global orchestration platform which runs all of Dropbox with 99.95% uptime.
- Discover and implement platform wide performance improvements using eBPF and BCC tools.
- Drive platform support for AI and other GPU accelerated workloads at Dropbox.
- Troubleshoot and mitigate Linux kernel performance regressions and bugs (cgroups, networking, mm).

Senior Software Engineer Lead **3v Geomatics** **May 2021 – August 2022**

- System design of petabyte scale hybrid cloud system residing on AWS and private datacenters.
- Lead design and implementation of AWS serverless geospatial data API: Lambda, DynamoDB, S3, CDK.
- Technical lead for software engineering team. Hiring, mentoring, professional development, company wide initiatives, cross department technical planning, long term company wide technical roadmap.

Senior Software Engineer **3v Geomatics** **August 2018 – May 2021**

- Sped up data delivery pipeline by 10x and improved data compression by 20%.
- Reduce micro-service code size by 40% after simplifying hybrid Postgres/DynamoDB data model.
- Improved HPC data pipeline observability by migrating from NFS based logging to GrayLog.
- Implemented event driven system to selectively notify engineering team of data processing failures.

Software Engineer **Electronic Arts** **September 2017 – July 2018**

- Engineer and maintain 24x7 automation systems containing hundreds of VMs and consoles.
- Automate hardware farm self healing actions to boost reliability to over 99%.

QA Tools Developer **Kardium** **May – December 2016**

- Reduced engineering change overhead of clinical designs by 60% via process automation.
- Developed safety critical quality management and regulatory systems which were formally tested and verified to meet ISO 13485 clinical requirements.

Researcher/ Software Developer **Syncrude Research** **January – August 2015**

- Researched/Developed patented technology: <https://patents.google.com/patent/CA2932064A1/en>

Software Developer **Ballistic Echo Inc** **May – August 2014**

- Integrated SQL, .NET, and EXCEL to create an automated database reporting tool.

Interests

- Linux systems programming and OS primitives (namespaces, cgroups, shared memory, networking, kernel).
- Network security, application security, and security tenable to users.
- Aiding the human aspect of development: ergonomic tools, standards, static analysis.

Extras

- **Website** - <https://eliascarter.ca>
- **Open source sample of my work** - <https://github.com/NVIDIA/go-nvml/issues/36>
- **GitHub** - <https://github.com/edcarter>

Education

Edmonton, AB **University of Alberta** **Fall 2012 – April 2017**

- BSc in Computer Engineering co-op, with distinction, April 2017. GPA: 3.8