TRAVIS BROWN

Canim Lake, B.C., Canada   *(778) 232-7741; travisbrown@travisbrown.ca*

Skills

- **Software Development Tools and Environments:**

  - ▶ Proficient with source control (Git, Perforce, Quilt, etc) (10+ Years)
  - ▶ Proficient with code review (Gitlab, Reviewboard, Gerrit) (10+ years)
  - ▶ Proficient with modern build systems (Bazel, CMake) (3 Years)
  - ▶ Proficient with typical tools and techniques for debugging distributed and embedded network systems
  - ▶ Linux development experience (Ubuntu/Debian, Redhat and other variants) (10+ Years)

- **Computer Languages:**

  - ▶ Proficient in C, C++, Python, Unix Shells (10+ Years)
  - ▶ Experienced in Go (3 Years)
  - ▶ Have dabbled with Lua, Perl, Java, Objective-C, SQL, C#, AWK, Javascript, and others

- **Specialities:**

  - ▶ Distributed/multiprocess/network development
  - ▶ Linux kernel network protocol development
  - ▶ High performance and latency constrained implementations
  - ▶ Build systems

Experience

- **Huawei Technologies Canada**—Burnaby, B.C.
  Principal Engineer   *April 2021–present*

  - Research, design, and implement minimum viable implementations for various protocols and features including: HTTP2, Web-Application-Firewall (WAF), SAML2, and Lua userscript integration.
  - Technical lead for the next-generation gateway/firewall core eight person Canadian research team.
  - Define and implement team development procedures, agile methodology, and tooling to maximize efficiency with a small, fast moving team.
  - Educate team members in all aspects of high-performance network software development through presentations, teachable code-review, and one-on-one discussion. This includes collaboration with developers in China.

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Experience Cont'd

- **Arista Networks**—Burnaby, B.C.
  Software Engineer   *March 2013–April 2021*

  - New product bring-up, tasks include vendor SDK integration, early hardware bring-up, adapting existing code to support new hardware, and design of a short-period outage redundancy feature.
  - Architect of an in-house distributed build system; technical lead for the distributed file system component (QuantumFS) heading a team of three.
  - Architected and designed a real-time, low-latency connectivity protocol (BFD) implementation; primary developer of the Linux kernel module component.
  - Linux kernel developer responsible for kernel upgrades, performance improvements and bug fixing, in addition to inter-team debugging and design consultations.
  - Continual background responsibilities included writing automated tests, release bug triage, top-level customer support, and reviewing designs, as well as maintenance and sustaining of previous work.
  - Mentored new hires and managed co-op students; participated in interviewing.

- **Tellabs**—Richmond, B.C.
  Sr. Software Engineer   *July 2011–February 2013*

  - Laid core virtualization infrastructure for router in-service upgrade support.
  - Lead slowpath and general kernel developer for the 9200 router.
  - Ported entire 9200 code base from proprietary third party IP stack to Linux IP stack.
  - Designed, implemented, and supported various protocols in Linux slow path including: Ethernet, VLAN, QinQ, 802.1p, IPVPN (VRF), ACLs, PBR.
  - Responsible for the maintenance and enhancement of the ARP/NDP/next hop distribution system.

- Solely responsible for porting the C++ daemon from Windows to Mac OS X.

Patents

▶ US-10530869 – Bidirectional forwarding detection accelerator

▶ US-9703582 – Share access of allocated storage space via in-memory file system between virtual machines

Formal Education

- **Simon Fraser University**—Burnaby, B.C.
  BSc: Computing Science

  - First class honours with a concentration in Theoretical Computing Science
  - Cooperative Education Certificate