

Sam Roberts

103 - 228 18th Ave East
Vancouver, BC V5V 1E6
Canada

Phone: 236-330-4820

Email: vieuxtech@gmail.com

URL: <https://sam-github.github.io>

Career

Software developer with 20+ years of experience in a variety of industries, languages, and platforms. Consistently develop innovative tools and technologies that are adopted as core elements of my companies' software development and business practices. Worked remotely since 2013.

Highlights

Multi-language: C, C++, Javascript (server side), Lua, Python, Ruby, some Go.

Systems level APIs: event-driven and non-blocking I/O, sockets and low-level network, Linux/UNIX.

Cryptography and Security: implement cryptographic protocols and formats, test security of network protocols.

Open-source: Node.js TSC member, conference speaker, authored or contributed to many open-source projects.

History**Senior Software Developer**

IBM Canada, Runtimes (developer.ibm.com/node/sdk/)

October 2018–present

Contribute to Node.js project, primarily in crypto/security, LTS release lines and IBM platform support.

Achievements:

- Added TLS1.3 support to Node.js (github.com/nodejs/node/pull/26209).
- Coordinate Node.js security releases (nodejs.org/en/blog/vulnerability/).
- Member of Node.js Technical Steering Committee (TSC).

Senior Software Developer

IBM Canada, Runtimes (github.com/RuntimeTools)

October 2016–September 2017

Contribute to Node.js project and IBM projects integrating with Node.js.

Achievements:

- Integrating github.com/strongloop/strong-pm with IBM's github.com/RuntimeTools/appmetrics.
- Back Pressure, or, Don't Accept Work Before You're Ready, Node.js Interactive, Oct 2017, www.youtube.com/watch?v=Bz0EkaH4S7Y (also, Nodeconf.eu, Nov 2017).
- Node's Event Loop from the Inside Out, Node.js Interactive, Austin TX, Dec 2016, www.youtube.com/watch?v=P9csgxBgaZ.

Senior Software Developer

IBM Canada, APIConnect (developer.ibm.com/apiconnect)

November 2015–September 2016

Lead time of 3 IBM developers to integrate Strongloop Node.js runtime technology into IBM's APIConnect using github.com/strongloop/strong-supervisor.

Achievements:

- Node.js API Pitfalls: Can You Spot Them?, Node.js Interactive, Portland WA, Dec 2015, www.youtube.com/watch?v=jJalwea8r2A.

StrongOps Team Lead

Strongloop (strongloop.com)

April 2013–October 2015

Lead StrongOps team.

Achievements:

- Develop deployment, management, and monitoring for Node.js applications (strong-pm.io).
- Maintain and publish Strongloop modules and CLI (github.com/strongloop/strongloop).

Senior Architect and Development Lead

Wurldtech (wurldtech.com)

May 2007–March 2013

Lead a team of 8 developers developing a network security testing appliance.

Achievements:

- Implement Scrum, and ship product within first year of development.
- Rewrite the network protocol implementation and test framework in Lua.
- Develop tests and Wireshark dissectors for many IPv4 and industrial protocols.
- Write a Lua-based protocol dissector and rule engine for a Linux/VxWorks IDS.

Senior Software Architect

Bycast (bycast.com)

Nov 2005–June 2007

Work on storage grid, a distributed network of redundant, fault-tolerant Linux servers.

Achievements:

- Implement grid communication protocols in Ruby, so Grid QA could be scripted.
- Implement a HTTP/XML API for the grid, and rewrite the HTTP server for standards conformance and security.
- Implement support for grid components to be written in Lua.

Senior Software Developer

Certicom Corp. (certicom.com)

Oct 2000–Oct 2005

Develop C language cryptographic toolkits optimized for high performance and low memory usage.

Achievements:

- Integrate support for 3rd party crypto libs into Crypto-C API, and standardize across all SDKs (IPSEC, TLS, PKI).
- Design Certicom's PKI-C toolkit. Implement PKI-C support for: BER/DER; keys, certificates, CMS, and PFX.

Software Developer

Cogent Real-Time Systems (cogent.ca)

Oct 1998–Oct 2000

Custom QNX development for clients in C and Gamma (Cogent's LISP-based scripting language).

Achievements:

- Implement QNX's message passing API as a Linux kernel module and port Cogent's tools to Linux (opcdatabus.com/Docs/booksr.html).

Development Lead

International Submarine Engineering (ise.bc.ca)

1995–Oct 1998

Maintain and develop ACE, a component-based and asynchronous event-based kernel implemented in C++ and used to control remotely operated vehicles. Ported ACE kernel to QNX, and transitioned ISE to using an OS.

Education

B.A.Sc. in Engineering-Physics, Computer Science Option, 1996

University of British Columbia

Projects

Node.js packages: modern-syslog, ~9K downloads/week (npmjs.com/package/modern-syslog); debuglog, ~1.2M downloads/week (weirdly) (npmjs.com/package/debuglog); strong-supervisor, ~1.7K downloads/week (npmjs.com/package/strong-supervisor); and authored or maintained many more (npmjs.com/~octet).

libnet Adopted this widely used packet crafting and injection library, fixed the known bugs, and re-released. It has been accepted downstream by Debian and Fedora. I am trying to pass to new maintainers. (github.com/libnet/libnet)

luasocket. Reintegrated multiple CVS and Mercurial forks into a single github repo, brought collaborators together, and then passed project back to original author (github.com/diegonehab/luasocket/graphs/contributors).

Lua bindings: github.com/sam-github/pcap-lua; github.com/sam-github/netfilter-lua; github.com/sam-github/termios-lua; github.com/sam-github/bcrc-lua.

vPim. Ruby support for vCard and iCalendar formats (github.com/sam-github/vpim)

GNU mailutils. Contributed to email address decoding, file locking, SMTP, etc. (savannah.gnu.org/projects/mailutils/).