

# Bheesham Persaud

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Full-stack developer looking to solve challenges related to managing large scale networks.

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## Employment

- Auvik Networks, *Software Developer*** 10/2017 - Present  
Stuff.  
**Technologies:** Scala, Python, SNMP, AWS (S3, EC2).
- CENX, *Software Developer*** 05/2016 - 09/2017  
Developed service assurance solutions for telecommunication companies.  
Improved the deployment story for new components in our technology stack.  
Improved the development and testing workflow by emulating the production environment.  
**Technologies:** Clojure, ZooKeeper, Kafka, WildFly, Datomic, PostgreSQL, RethinkDB, Docker.
- Shared Services Canada, *Developer / Analyst*** 04/2015 - 01/2016  
Optimized programs that monitor the health and usage of large networks by reducing disk I/O and redundant steps.  
Created intranet websites which generate reports about network outages and changes.  
**Technologies:** Solaris 10, C#, JavaScript, Perl 5, SNMP, SAS, Microsoft SQL Server.
- Carleton University, *Research Assistant*** 05/2013 - 12/2014  
Researched methods to increase software diversity by creating permutations of the OpenSSL library.  
Researched and implemented gesture based authentication for Android and iOS.  
**Technologies:** Java, Objective-C, JavaScript, Python, PHP, C/ C++ , {Open, Boring, Libre}SSL, L<sup>A</sup>T<sub>E</sub>X.
- Carleton Computer Science Society, *Director At Large: Services*** 05/2012 - 05/2014  
Maintained a variety of services the society ran, such as website, DNS, and forum.  
**Technologies:** Ubuntu Server, NGINX, PowerDNS, Python, Plone.
- Canadian Association of Physicists, *Webmaster*** 01/2012 - 04/2013  
Maintained the Drupal website along with its many plugins and the Members only area.  
Fixed security flaws in legacy PHP and ASP systems.  
Created new services to manage the release of magazines on a quarterly basis.  
**Technologies:** ASP.Net, PHP, Kohana, CodeIgniter, jQuery, JavaScript, Drupal, Moneris.

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## Open-source Contributions

- Redox, <https://www.redox-os.org>**  
Fixed bugs in the assembly which allowed the operating system to run on the x86-64 architecture.
- xbps, <http://www.voidlinux.eu/>**  
Improved documentation for xbps, the package manager of the Void (Linux) distribution.
- The Rust Programming Language, <http://rust-lang.org/>**  
Improved the project's build scripts and documentation.
- The Rust Project's Buildbot, <http://buildbot.rust-lang.org/>**  
Configured Buildbot to sign all release builds automatically and added basic authentication to the instance.

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## Academics

- Carleton University** 09/2011 - 02/2017  
Bachelor of Computer Science: Computer & Internet Security Stream, Honours  
**Thesis:** FrankenSSL: Recombining Cryptographic Libraries to Create Software Variants  
**Supervisor:** Dr. Anil Somayaji

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## Publications

- 08/2016  
B. Persaud, B. Obada-Obieh, N. Mansourzadeh, A. Moni, and A. Somayaji. FrankenSSL: Recombining Cryptographic Libraries for Software Diversity. *Proceedings of the 11th Annual Symposium On Information Assurance.*