

**Summary** A creative Software Developer with a strong cross-technology skill-set. Looking for opportunities to leverage my existing skills in Site-Reliability Engineering, Performance, and related Dev/Ops work.

**Education** *Bachelor of Computer Science*, Class of 2006.  
Concentration in Information Security  
Minor in Business  
Carleton University, Ottawa, Canada  
Thesis: "*Practical Mitigation of Malicious Network Resource Consumers*"  
Supervised by Dr. Anil Somayaji.

**Research Topics** Network Security, Internet of Things, Usability, and Ubiquitous Computing.

**Qualifications** *Programming Languages:* C, C#, Golang.  
  
*Scripting:* Ruby, Perl, Python, Various Javascript Toolkits.  
  
*Data Management:* HADOOP MR/Spark, PostgreSQL, MySQL, Redshift/RDS.  
  
*Toolkits:* Chef, Apache Hadoop stack, Rails/Sinatra, Node.js, AWS/Heroku/Digital Ocean, Django.  
  
*Tools:* VIM, Git, Visual Studio 2003-2008.  
  
*Software Engineering:* Agile/XP Development, Design Patterns.  
  
*Technical Interests:* Containers, Managing Big-Data Clusters, Frameworks and Middleware, Dynamically Typed Languages, Query Planners.

**Primary Professional Experience**

<b>RaCharge Payments</b> Santa Monica, California (Remote)	Senior Software Developer/DevOps Lead 2016 - 2018
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- Introduced and managed CI/CD processes.
- Worked on dockerizing the codebase and migrated the infrastructure from an adhoc deploy supervisorctl/runit method to a dockerized cluster managed on Digital Ocean. Prototyped ECS/EKS orchestration alternatives.
- Implemented SRE principles to monitor security and performance on a variety of services provided to merchants and customers using modern industry stdards (statsd, newrelic, pagerduty).
- Worked on BFCM preparations for checkouts, a variety of strategies for improving throughput and managing complex business logic flows that are externals bound (e.g. stripe, avalara, ups, shopify).
- Implemented a backgrounding mechanism based on Python's RQ (with healthy ripping off of Resque/Sidekiq mechanisms, as RQ is relatively barebones). Added exponential and a variety of LRU backoff strategies to accomodate external resource throttles.

<b>Rarelogic</b> Ottawa Canada	Senior Software Developer 2015-2016
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- Applied SRE and CI/CD mechanisms to aid in modernizing a prototype codebase in preparation for wide access by customers.
- Converted a complex microservices architecture from sorta-node.js to rails, added test coverage and proper code release mechanisms.

- Stabilized and modernized the database architecture from a customer in-memory redis based to one backed by postgresql and cassandra.
- Lived with the horror that is MTA bulk emailing IP reputation management.

**Shopify**  
Ottawa Canada

Seor Software Developer  
2012 - 2015

- Shipped multiple products from MVP to Production Ready of new features, including Merchant Admin Console BI reporting tools, making use of data cubes, a custom golang lmdb analytics database, and a variety of real-time ETL stacks.
- Worked on the SRE team on flash sales and security infrastructure. Focus on preparation for Black-Friday/Cyber Monday flash sale load.
- Shipped the first revision of a performant multi-datacenter HTTP router using Lua and Nginx to replace HAproxy
- Helped migrate a large Hadoop Data Cluster from MR1 to MR2. Then prototyped and ran a migration for a 1000 job ETL scheduler. Worked on cluster performance, stability, hardware maintenance, and recoverability.
- Set up, migrated, and administered a Tableau High-Availability cluster.

**Wildbit**  
Ottawa Canada

Software Developer  
2011 - 2012

- Ran DevOps for the Postmark stack, which included a variety of windows services, centos servers, and a stack of microservices to fulfill all tasks from searching, sending, MTA maintenance, and UI performance.
- Created and delivered a variety of features, including a migration from an admin dashboard powered by MongoDB to one powered by Elasticsearch and CouchDB. Part of this project required the creation of a custom MongoDB to ES replication strategy.

**VDOlife**  
Ottawa Canada

Web Software Developer  
May 2009 - Present

- Designed features for the VDO product line using javascript, CFML, php, and python.
- Took on the head architect role for at least one prototype product and produced a working sample on short notice.
- Administrated production Redhat and Ubuntu servers responsible for web and media streaming to the public.

**OneChip Photonics**  
Ottawa Canada

Software Developer  
May 2009 - Present

- Duties included advanced understanding of C# coding standards, problem identification and solution, deployment strategies for libraries and applications (internal and customer facing). Also responsible for training test automation and electrical engineers in basic software design principles.
- Responsible for the creation and maintenance of several test automation software for photoptic devices, with a heavy focus on robotic validation of circuitry using computer vision algorithms.
- Designed an internally used extensive API for test automation libraries, test stations, GPIB device drivers, and a LINQ based ORM for manipulating test data results.

**Self Employed**  
Ottawa Canada

Web Software Developer  
January 2009 - July 2009

- Took on several projects using a variety of tools, such as Joomla, Wordpress, and django/python.

- Provided Joomla training, design, and maintenance to several teams and developers.

**Macadamian Technologies**  
Ottawa Canada

Software Developer  
June 2006 - January 2009

- Worked in a team to design and deliver major features of embedded VOIP desktop and software phones, including Emergency dialing/routing, UI re-design, SMS messaging, and designing feature provisioning using SOAP.
- Developed plug-ins for a Microsoft Office tool, as well as developing and maintaining a variety of custom Windows installers using the WiX framework.
- Took on customer facing project leadership tasks in project administration, status reporting, workload division, and quality assurance communication in a six person globally distributed project.
- Advanced personal understanding of low level embedded systems written in C/C++, such as writing applications for the EFI Framework and VxWorks.
- Represented Macadamian in professional and recruiting events, as well as co-editing the corporate blog, and developing the competition monitoring, solution submission, and marking web application for the CS Games 2007 Programming competition (written in PHP with an open source AJAX toolkit).
- Created and ran internal training discussion groups (Barcamps) on topics ranging from iPhone/Android SDKs to Semantic Web technologies.

**International Datacasting Corporation**  
Ottawa Canada

Software Developer  
June 2004 - June 2006

- Implemented a customized "heartbeat" monitoring tool for a realtime satellite broadcasting headend network using C# and a variety of win32 libraries.
- Developed an in-house used Wireshark (C++/GTK) visual plugin for debugging of the control protocol, previously done via notepad and a hex dump.
- Responsible for system maintenance of RedHat Linux and Windows enterprise platforms, and aiding in a variety of projects, from a video transmission tool written in VB, a real-time AJAX scheduling tool written in PHP, and in-depth work with a c/perl head-end satellite receiver management web application.