

# Jeffrey Charles

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## Work Experience

Software Developer

*Vidyard (Kitchener, Ontario), Sept 2016 - Present*

Senior Developer

*Canadian Tire (Kitchener, Ontario), Aug 2015 – Sept 2016*

- Part of innovation lab working on new product research and development as well as software tools to improve to in-house processes
- Projects have included:
  - Implementing a web service in Node.js for storing sensor data from an IoT (Internet of Things) prototype
  - Writing a Cordova app using Angular for managing an IoT product
  - Writing native Android and Windows apps for non-interactive digital signage and device monitoring (downtime detection and hardware metrics)
  - Writing automated unit tests for Arduino-based firmware
  - Centralized client-side logging and alerting (browser to API endpoint to Logstash to Riemann to Pagerduty)
- Introduced low-effort continuous integration using CircleCI and static analysis tools (eslint, FindBugs, and PMD) as well as tooling around continuously deploying Android alpha application updates to the Google Play store

Senior Software Developer

*D2L (Kitchener, Ontario), Oct 2013 – Aug 2015*

- Worked on alternative front-end to core product using Node.js, Angular, MongoDB, AWS Elastic Beanstalk, S3, ELK, and Docker
- Built and shipped microservices using AWS Elastic Beanstalk, SQS, RDS (PostgreSQL), ELK, CloudFormation, and Docker to add distributed user administration to core product
- Developed infrastructure in the form of a service-oriented architecture to support continuous delivery of core product using Puppet, Ruby, Nancy with C#, Jenkins, Logstash, Elasticsearch, and Powershell
- Team lead (8 person team) on internal award-winning hackathon project using Node.js, Express, AngularJS, and Vagrant

Software Developer

*D2L (Kitchener, Ontario), Sept 2011 – Oct 2013*

- Designed and developed HTTP APIs and infrastructure to enable first and third-party integrations

- Developed .NET library that given an HTML file, generates a dependency graph of linked files on same domain, with ability to re-write links across all affected files when all files in the graph are moved
- Consulted with and presented to third-party API consumers at 2012 and 2013 Desire2Learn FUSION Users Conferences
- Developed static analysis tools to analyze T-SQL and .NET CIL for dependency tracking and identifying common errors
- Conducted internal presentation about automated testing

Software Developer (part-time)

*D2L (Kitchener, Ontario), May 2011 – Aug 2011*

- Developed HTTP APIs to enable first and third-party integrations

Software Developer (co-op)

*D2L (Kitchener, Ontario), Sept 2010 – Dec 2010*

- Developed web interface for plugin management, mobile web interface for discussions, and web interface for brand management tool using C#, SQL Server, and JavaScript

Freelancer

*(Waterloo, Ontario), On-and-off Sept 2007 – Apr 2011*

- Worked in various capacities as a contractor on various web development projects
- Development work involved CodeIgniter PHP, jQuery, MySQL, and PostgreSQL
- Non-development work involved penetration testing and usability reviews

## Education

Bachelor of Business Administration (co-op option)

*Wilfrid Laurier University, Sept 2007 – Aug 2011*

## Github Toy Projects

- *VisitorDetector* - Android app written in Kotlin that uses OpenWRT APIs to detect unknown devices on a network (for avoiding overnight parking tickets)
- *number-switcher-3000* – Web app for managing phone number forwarding for apartment buzzboard (uses Express, React, Redux, Docker, hosted on AWS Elastic Beanstalk)
- *GraphicalHttpClient* – Basic desktop GUI HTTP client implemented in Scala
- *Pong* – Java implementation of the classic game (learned a fair bit about automated testing and multi-threaded programming)
- *batarim-utilization-logger* – C++ desktop console application for Windows and Linux that outputs various system metrics to a log file (learned how to interact with Win32, POSIX, /proc, X, author deb packages and msi's)
- *Open-Source-At-Laurier-Website* – Django (Python) website with a custom implementation for creating and managing nested comments