

# Kieran Colford

---

## Summary of Qualifications

- Excellent problem-solving skills demonstrated by education and self-initiated open source projects
- Commended by supervisors on a consistent basis for being a highly reliable and independent hard worker
- Gained extensive skills through personal experience in a number of programming languages and technologies.

**Programming Languages** C/C++, Go, Java, Python, Javascript/NodeJS, x86 Assembly (AT&T syntax), Perl, Haskell, Bourne Shell, SQL, Emacs Lisp, and Racket

**Technologies** Neural Networks, Ethereum, TCP/IP, IPv6, UDP, SCTP, SSL/TLS, Three.js, Apache Web Server, Nginx, CGI, MySQL, PostgreSQL, CouchDB, Bind 9, Busybox, Kerberos, OpenLDAP, Samba, Wire Guard, OpenVPN, X.509, Let's Encrypt, GnuPG, IPFS, Libvirt, Docker, Containers, WebGL (OpenGL ES), HTML5, JSON, XML, AngularJS, JQuery, Ajax, and CSS3

**Documentation** Org Mode, Doxygen, Markdown, ReStructuredText and L<sup>A</sup>T<sub>E</sub>X

**Libraries** Tensorflow, OpenMP, Qt, Gtk+, OpenGL, SQLite and Boost

**Build Systems** Grunt, Gulp, Makefiles, CMake, and GNU Autotools

**Development Tools** GIT, GDB, Jenkins, Unix Command Line, Linux, Arch Linux and Emacs

- Canadian Citizenship

## Work Experience

Sept. 2017–Apr. 2018 **Fullstack Software Developer**, *University of Waterloo, Computer Science Computing Facility*, Waterloo, Ontario.

- Used machine learning to design and build an Optical Character Recognition pipeline.
- Maintained and improved software and services essential to university operations.
- Converted a large legacy code base from Python 2 to Python 3.

May.–Aug. 2016 and Jan.–Apr. 2017 **Fullstack Software Developer**, *BlueRover*, Kitchener, Ontario.

- Engineered a trend analytics engine that identifies potential hazards in food preparation thanks to data provided by the I.O.T. (Internet of Things) infrastructure.
- Maintained and expanded major product offerings using innovative tools and techniques.
- Independantly developed a multitude solutions for our existing product base in an agile environment.

Sept.–Dec. 2015 **Software Developer**, *Ontario Teacher's Pension Plan*, Toronto, Ontario.

- Received an outstanding work term evaluation from my employer.
- Reverse engineered the database for a third party product, and then developed an app for non-developers to view relevant content of the database.
- Designed and produced a backwards compatible service for sending email from enterprise applications.

97 Arundel Ave. – M4K 3A3, Toronto, ON – Canada

✉ kieran@kcolford.com • 🌐 www.kcolford.com • in kierancolford

🐙 kcolford • StackOverflow: randomusername (almost 6,000 reputation)

1/2

- Jul.–Aug. **Sailing Instructor**, *Camp Tamarack Ltd.*, Bracebridge, Ontario.  
2013 and ○ Appointed interim Head of Sailing whenever the usual head (my supervisor) was unavailable  
Jul.–Aug. (day off, arranging special events, etc.)  
2014 ○ Supervised young children in open water environment, acting as both a teacher and a life guard.  
○ Exhibited excellent teamwork skills through the fostering of strong work relationships.

---

## Education

- 2014–present **Candidate for Bachelor of Mathematics**, *University of Waterloo*, Waterloo, Ontario.  
2014 **Ontario Secondary School Diploma**, *The Abelard School*.

---

## Awards

- 2014 **Evgeny Kravchenko Memorial Scholarship**, *University of Waterloo*.  
2014 **University of Waterloo President's Scholarship**, *University of Waterloo*.  
2014 **AP Scholar with Distinction**, *The College Board*.  
Awarded for receiving an average score of at least 3.5 on all AP Exams taken, and scores of 3 or higher on five or more of these exams.  
2014 **The Alan Turing Award for Excellence in Computer Science**, *The Abelard School*.  
2014 **Ontario Scholar Certificate**, *The Abelard School*.

---

## Projects

- 2017 **Dynamic DNS**.  
Designed and developed software to dynamically update DNS records for nodes without static IP addresses for reducing costs and improving usability of mobile workstations.  
2016 **Linux Firmware Support**.  
Developed firmware for supporting the Atmel MaxTouch Touchscreen in the Lenovo Thinkpad Yoga 11e Chromebook (and other devices such as the Google Pixel 2) on vanilla Linux kernels.  
2016 **Personal Enterprise Infrastructure**.  
Networked together all personal computing platforms, from Chromebook to cloud virtual machines and containers to desktop, in an enterprise grade infrastructure based on Arch Linux.  
2016 **Port of GCC to Course Specific Architecture**.  
Ported the GCC to a variant of MIPS specific to the CS 241 course in which students write their own compiler. (*could not publish*)  
2015 **UWaterloo AddCourse**.  
A Python App that eases the task of getting into courses after the course selection date.  
2014 **Boilerplate Generator**.  
Developed an easy to use boilerplate generator that analyzes comments in source code and generates code based on those comments.  
2014 **Mongoose**.  
A fully fledged compiler for a Turing Complete subset of the C language.