

# GEOFF HOLDEN

FULL STACK SOFTWARE DEVELOPER

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St. John's, NL, Canada  
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## Summary

I'm a software developer with 10+ years of experience designing and writing code covering large scale object oriented designs all the way down to tiny microcontrollers.

## Skills

### Development

I design and develop software for platforms of all sizes, including microcontrollers, embedded Linux, mobile devices, desktop computers, and distributed systems.

### Operations

My background in system administration and operations gives me valuable perspectives on designing for deployment, configuration management and scalability.

### Problem Solving

My natural tendency for problem solving and debugging assists with tracking down and rectifying issues in codebases and environments alike.

## Technical

C / C++

Java

Ruby (on Rails)

Go

XHTML

CSS

JavaScript

Git / CVS / Subversion

SQL / MySQL

Microcontrollers

Linux

Android

## Experience

SEAformatics Group,  
Memorial University of Newfoundland (<http://seaformatics.ca>)  
Research and Project Engineer

St. John's, NL  
2010–Present

- Design and development of a power-efficient stack of microcontrollers to perform data acquisition, communications, and battery charging in a subsea environment.
- Development of a web-based data visualization application in Ruby on Rails.
- Deployment and testing of sub-sea acoustic modems.
- Software development on embedded Linux, Arduino, and Ruby on Rails.
- Investigation of sub-sea networking algorithms.
- Circuit and PCB design and fabrication.

Progress Software (<http://progress.com>)  
Software Engineer

St. John's, NL  
2007–2009

- Created a Requirement Traceability Matrix web application using Ruby on Rails
- Wrote a set of user interface guidelines to help avoid common mistakes, and increase inter-product consistency
- Fixed bugs and created demos for Apache ActiveMQ
- Bug fixing and feature development for Artix Data Services
- Produced and managed patches for the Artix product
- Bug fixing and new feature development for SonicMQ

Google Inc. (<http://google.com>)  
Site Reliability Engineer

Mountain View,  
CA  
2006–2007

- Automation of tasks through the development of scripts and administration tools.
- Configuration of system and network parameters.
- Monitoring of system stability and performance.
- Ensuring 24x7 operation of cluster.
- Comprehensive documentation of procedures.

## Verafin Inc. (<http://verafin.com>)

### System Architect

St. John's, NL  
2004–2005

- Software design and development.
  - Researching and implementing new technology.
  - Responsible for the architecture and design of the technical environments (servers, storage, database, middleware, software, network and desktop) for the various developed and integrated applications.
  - Responsible for the management of the network, servers, and workstations.
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## Education

### Bachelor of Engineering in Computer Engineering

Memorial University of Newfoundland (<http://www.mun.ca>)

St. John's, NL  
1998–2004

Memorial's computer engineering program covers a wide breath of topics, such as software development, analog and digital circuits, microprocessors, signal processing, telecommunications, and instrumentation and controls. It is also a co-operative education program that included six separate four month work terms in the industry.

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## Publications

- **Holden, G.,** Cook, A., Masek, V. "Development of an Energy-Based Routing Protocol for Underwater Networks", *21st Annual Newfoundland Electrical and Computer Engineering Conference (NECEC 2012)*
  - Cook, A., Masek, V., Press, A., **Holden, G.,** Boyd, R. "The Seaformatics Technology Demonstration Project", *OCEANS '14 MTS/IEEE*
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## Volunteer

### IEEE

IEEE Newfoundland and Labrador Section (<http://newfoundlandlabrador.ieee.ca>)

- Currently membership development chair
- Served as treasurer from 2010–2013
- Served as webmaster from 2008–2009

Treasurer – 14th Canadian Workshop on Information Theory (CWIT 2015) (<http://cwit.ca/2015/>)

Publications Chair – 22nd Canadian Conference on Electrical and Computer Engineering (CCECE09)

- Verified that all the papers were formatted correctly for publication, and worked with the authors to fix any issues.
- Compiled the papers for both the print and electronic proceedings.
- Sourced USB keys for electronic proceedings and did the logo design to be printed on the keys.
- Designed and implemented a web-based layout for the electronic proceedings on USB key.
- Submitted the papers to be included in IEEE Xplore.

Publications Committee Member – 17th International Engineering Management Conference (IEMC2005)

### St. John's Linux Users Group

Was a key organizer and very active member of the group from 1998 to 2006. This involved both giving regular seminars and organizing a moderately sized group.

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