

# Jamie Hale

<http://smallarmyofnerds.com>  
[jamie@smallarmyofnerds.com](mailto:jamie@smallarmyofnerds.com) | 647.886.6237

## SOFTWARE AND SOLUTIONS ARCHITECT

**20-year industry veteran** and **master craftsman**, artist and engineer, passionate about writing high quality code. **Expert C++**, **Javascript**, and **Ruby** programmer; expert in modern software engineering tools and processes; master of the *real* "full stack" from process to machine language and everything in between. Career-spanning track record demonstrating an uncanny ability to assess and learn new systems and technologies in record times. Dangerous with a soldering iron.

## EDUCATION

### UNIVERSITY OF TORONTO

#### B.Sc. (HON) IN COMPUTER SCIENCE

1998 | Toronto, ON

Specialized in Software Engineering

## LINKS

Github:// [jamie hale](#)

LinkedIn:// [jamiesonhale](#)

Twitter:// [@jamie hale](#)

StackOverflow:// [Jamie Hale](#)

(Ethereum:// [Jamie Hale](#))

## SKILLS

### LANGUAGES

C++ (C++14) • Ruby 2.4

Javascript ES6 • TypeScript • Solidity

C# 3.5 • Java 8 • C (C11)

Python 2.7 • Bash •  $\LaTeX$

### FRAMEWORKS

Angular2+ • VueJS • React

Express • Rails

### TOOLS

Git • Docker

Jest • Mocha

NUnit/XUnit • RSpec/Cucumber

### TECHNIQUES

Functional & Reactive Programming

Devops • CI/CD

SOLID Principles • TDD + BDD

OOA + OOD (per Jacobson et al.)

Agile (per Robert C. Martin et al.)

Refactoring (per Martin Fowler et al.)

UML

### PLATFORMS

GNU/Linux • OSX

Android • Ethereum

AWS • Windows

## EXPERIENCE

### Rangle.io | SOLUTIONS ARCHITECT

Apr 2017 – Present | Toronto, ON

- Trained and consulted in Angular2+, Javascript, TypeScript, and Node.js (remote and on site in Ohio and Colorado -- top-5 American auto insurer)
- Upskilled two C# developer teams to the point where they were submitting well-written Angular2+ features
- Trained and mentored Rangle developers in software engineering practices boosting their effectiveness as consultants
- Provided architectural and devops support for multiple React Native mobile applications enabling the team developers to produce feature work uninhibited

JavaScript ES6 and TypeScript • Angular2+ and VueJS • Node.js and Express

React Native, Java, C++, and Objective-C • HTML5 and CSS3

TensorFlow and Python • AWS and Terraform • Docker

### SMALL ARMY OF NERDS CORP. | PRINCIPAL / PRESIDENT

Jan 2011 – Apr 2017 | Markham, ON

- Recruited and built a small team of strong developers, mentored them in modern software development techniques, ended up with a tight team producing high-quality code faster and cheaper than industry competitors
- Trained team in client's 500k+ line software suite, plus troubleshooting and client management skills, enabling on-site 24/7 support of client's legacy inspection systems minimizing downtime while maximizing system longevity
- Delivered multiple on-time and under budget bug-free software revisions, contributing heavily to an approximately 50% improvement in inspection times -- the equivalent of over \$10 million per year in power generation revenue
- Injected software engineering practices into a chaotic client environment through source code control, automated unit tests, and configuration management, resulting in higher quality and more frequent bug-fix releases

C++ (C++14, C++98, and pre-ISO) • C# & VB.NET (Visual Studio 2010, .NET 2 and 4)

Ruby • Git • FxCop & NUnit • Visual Basic 5(!) • Delphi 2(!)

Sqlite3 • SQL Server 2005 & 2008 • Dynamic C (for Rabbit microcontrollers) • UML

### PROVEN (DAO PARTNERSHIP) | CTO AND FOUNDER

May 2016 – Present | Markham, ON

- Authored Ethereum-based distributed autonomous organization (DAO) smart contract encoding multi-continent partnership
- Authored Ethereum-based smart contract suite for decentralized storage and manipulation of time-anchored censorship- and counterfeit-proof digital assets

Solidity 0.4 • Node.js 6 and ES6 • IPFS • MongoDB

## HOBBIES

### MUSIC

Drums • Guitar • Recording

### GAMING

Dungeons & Dragons (since 1983)  
Warhammer 40k

## BMO CAPITAL MARKETS | VP FINANCIAL PRODUCTS

(EQ. SENIOR SOFTWARE ENGINEER)

Jul 2009 – Jan 2011 | Toronto, ON

- Designed, built, and deployed financial adjustments web application, replacing email-based negotiation with centralized and auditable process
- Introduced team to change-control policies, unit-testing, automated one-step builds, and repository branch policies, resulting in higher quality releases
- Translated Rails web framework to PHP5, resulting in an extensible rapid development framework compatible with the bank's network policy
- Authored a unit-testing framework in PL/SQL because one did not exist

C# & VB.NET (Visual Studio 2005 & 2010, .NET 3.5) • PHP5 • Ruby • Subversion  
Oracle 10g and PL/SQL • SQL Server 2005 • UML • XHTML • CSS2

## ONTARIO POWER GENERATION | SENIOR ENGINEER

Aug 2006 – Jul 2009 | Pickering, ON

- Established modern software configuration management for large suite of applications, including source code repositories, automated unit-testing, build scripts, installers, and version-tracking
- Re-engineered data acquisition software to improve inspection workflow and minimize time lost to crashes and user confusion
- Liaised with and assisted with company-wide roll-out of revised software QA program based on CSA N286.7 for nuclear safety-related software

C++ (Visual Studio 2005) • Python • Ruby (and Rails)  
shell scripts for Windows and GNU/Linux systems

## OANDA | SOFTWARE ENGINEER

Jan 2006 – Aug 2006 | Toronto, ON

- Re-engineered original per-second interest calculation libraries for clarity, maintainability, and speed resulting in run-times reduced by an order of magnitude
- Introduced team of 25+ developers to modern software development techniques and tools including object oriented programming, UML, and automated unit tests
- Reviewed team's code for clarity and consistency

C++ (GNU) • Bash (GNU/Linux and Solaris) • Subversion • UML

## SAGE SOFTWARE CANADA | PRINCIPAL SOFTWARE ENGINEER

(PEACHTREE ACCOUNTING)

Sep 2004 – Jan 2006 | Toronto, ON

- Designed and built software features included in 2 major retail releases
- Lead re-engineering efforts replacing legacy database in legacy code base, balancing scalability and performance needs while leaving user experience unchanged
- Lead product feature team, reviewed code for clarity and consistency with company style guide, mentored and trained developers, assisted in hiring
- Represented my team in a large, multinational re-engineering effort involving 90 engineers
- Worked with marketing and other feature teams to develop technical specification and requirements documents

C++ (Visual Studio 2003) • Pervasive PSQL • Perforce • Javascript  
UML (Enterprise Architect)

## **GAMING OPEN MARKET | OWNER + CHIEF ARCHITECT**

(SEE GAMING OPEN MARKET ON [ARCHIVE.ORG](http://archive.org))

Sep 2003 – Jan 2006 | Toronto, ON

- "[T]he first currency exchange to build ATMs in a virtual world, and was both a great technical innovator and socially responsible firm. It has facilitated over \$25,000 USD in charitable donations to date, for organizations such as the American Cancer Society." - Tony Walsh
- Researched, built, and launched a successful web business in the online game services industry
- Facilitated over \$2.7 million USD in online game currency trades between over 9700 registered members
- Responsible for full life-cycle from ideation to sunset
- Panel speaker at 2004 Accelerating Change at Stanford University
- Panel speaker at 2004 Edinburgh Games Festival

PHP4 • MySQL • HTML4 • Subversion

## **WILKES ASSOCIATES LTD. | SENIOR SOFTWARE ENGINEER**

May 2001 – Mar 2004 | Toronto, ON

- Designed, built, tested, and maintained Flow real-time graphical playback software still in use during nuclear reactor fuel channel inspections
- Injected a full-featured Python scripting engine enabling subject matter experts to participate in a fluid research and development cycle for automatic analysis features
- Developed web application for graphically displaying Hydro One transient data, assisting in visualization and analysis of the Northeast blackout of 2003

C++ (Visual Studio 6) • Python 2.2 • Visual Basic 6 • ATL COM/DCOM  
Java • PHP4

## **LOGICTREE/SPEECHGATE | SENIOR SOFTWARE ENGINEER**

Jan 2001 – May 2001 | Toronto, ON

- Wrote web-based email client that fed VoiceXML to speech-enabled telephony server, enabling email capability through voice commands over cellular network
- Assisted in the full re-architecture of core server technology resulting in faster, more maintainable code
- Responsible for UML diagramming, ensuring the entire re-architecture team understood the design

Java/JDK 1.3 • JSSE/JCE/JavaMail • C++ (Visual Studio 6) • UML

## **EXCO EXTRUSION DIES | SOFTWARE ENGINEER / SYSTEMS MANAGER**

Apr 1999 – Jan 2001 | Markham, ON

- Sole software architect and engineer, responsible for design and implementation of full business process modeling three-tiered application suite (order entry, sales tracking, job and inventory tracking, invoicing and accounting), automating and optimizing a previously paper-based process resulting in a 30% speed increase in job processing
- Setup and maintained GNU/Linux-based mail and firewall servers, bringing faster and more secure email to both sales and engineering teams
- Maintained 50-computer network of CAD/CAM workstations, shop-floor job-tracking stations, sales and accounting desktops, printers, and Windows NT Servers

C++ (Visual Studio 6) • Visual Basic 6 • ATL COM • SQL Server 7  
ADO and ASP

## **IBM CANADA LTD. | IT SPECIALIST**

### **E-BUSINESS**

Jul 1998 – Apr 1999 | Toronto, ON

- Tested Lotus Notes applications, reported bugs, worked with developers to minimize fix times
- Upgraded and certified bank workstations, minimizing issues during platform roll-out
- Troubleshoot hardware and software configurations
- Trained extensively in Java and Lotus Notes

Java JDK 1.1 and J2SE 1.2 • Lotus Notes

## ASSOCIATIONS

- Associate member of the Free Software Foundation
- Associate member of the Electronic Frontier Foundation
- Professional member of the Association for Computing Machinery
- General member of the Information Systems Security Association
- Member of The Ontario Association of Remote Sensing

## CERTIFICATIONS

- OSCP (exam pending)
- Canadian Securities Course (2006)

## VOLUNTEER WORK

- Code.org (classroom visits, student and teacher mentoring)
- LEGO Robotics (school club coaching, FIRST LEGO League)