

AARON GRAHAM

PERSONAL INFORMATION

Born in Canada, September 9, 1990

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github www.github.com/aarongraham9
gitlab www.gitlab.com/aarongraham9

GOAL

Software Developer with experience in Java, C, and C++ in a professional environment. Comfortable with all major Operating system platforms. Aim to write high quality, reliable code. Interested in low-level and back-end development.

EDUCATION

2008-2013 The University of New Brunswick,
Fredericton

*Bachelor of
Computer Science*

Co-Operative Education Program · Faculty of Computer Science
Description: This degree focused on the fundamentals of Computer Science including; Software Engineering and Design, Algorithmic problem solving skills, and to develop new and innovative Software products.

TECHNICAL SUMMARY

Languages JAVA, C, C++, OPENGL, C# 3.5+, ASP.NET, MS/MY SQL, RACKET, x86 ASSEMBLY LANGUAGE, 68HC11 ASSEMBLY LANGUAGE, L^AT_EX, HTML, CSS, JAVASCRIPT, NODEJS, METEOR, XML, JSON

Platforms Windows 10/8/7/Vista/XP, Windows Server 2008, Mac OSX 10.5.9 Leopard 10.12 Sierra, UNIX Distributions; Cent OS, Ubuntu, Fedora, Red Hat, AIX and Debian

Technologies Git, Mercurial, Subversion, Perforce, Android Development (Version 2.1 4.1), Blackberry Java Development, Microsoft SQL Server 2005/2008/2012, Eclipse, Visual Studio 2008/2010/2012, Virtual Machines, Web Services

Skills Software Engineering, Software Development, Software Testing, Agile Methodologies, Scrum, Research, Object-Oriented Design, Unit Testing, Human-Computer Interaction

Additional Software JUnit, GDB, WinGDB, JBoss, REST, HornetQ, JMeter, HP Quality Center, Microsoft Office

WORK EXPERIENCE

Current Position: *2013–Present* Research Assistant / Software Developer,
CENTRE FOR ADVANCED STUDIES ATLANTIC (CASA) —
FREDERICTON, NEW BRUNSWICK

*Centre for
Advanced Studies
Atlantic (CASA)*

Responsible for development and modification of IBMs [J9 Java Virtual Machine](#) (J9 JVM) to provide a competitive advantage within the JVM marketplace.

CASA Projects:

Embedded Device Cloud Portal:

Contract work with a local New Brunswick company to design a Cloud Internet Gateway and Mobile Client for their behind-the-firewall embedded device management system. Developed a native daemon for their embedded system using C++, Boost, Boost.Asio, Beast (for WebSockets) and RapidJSON.

ddrgen: Debug Support for OMR:

In preparation for IBM [Open Sourcing](#) their Java Virtual Machine (JVM) Core from their [J9 Java Virtual Machine](#); IBM needed to port their [debugging tools](#) to the new code-base. This was realized by Researching and Developing the [ddrgen C++ tool](#) using the DWARF format for Linux debug symbols and the PDB format for Windows debug symbols. The ddrngen tool was publicly open sourced in the Eclipse OMR project.

System Monitoring Daemon:

Contract work with an Atlantic Canada company to design and build a C & C++ daemon with low level system calls to instrument and monitor system resources (CPU, RAM, Page Faults, Network Usage, Disk I/O and RAID Status/Events), along with data logging and notification capabilities, for their consumer server product offerings.

System Administration:

Perform System Administration duties; maintain internal documentation, assist and mentor other project members and aid in planning and organizing the Boot-Camp training for new students. Administer CASA systems (servers and network), install and set-up IBM's VPN and Security Software for new and current students, troubleshoot and debug various hardware and software issues.

Packed Objects:

[PACKED OBJECTS](#) in IBM's [J9 Java Virtual Machine](#) (J9 JVM) provide the JAVA developer explicit control of the layout of objects in memory. This can be used to model non-JAVA data structures (e.g. one provided by the OS or a third-party library) in such a way that JAVA code can directly manipulate the native data without having to resort to the use of Java Native Interface (JNI) or other similar technologies. Researched and Developed a JAVA Class Library (JCL) Class that re-implements the [JAVA.MATH.BIGINTEGER](#) Class using a PACKED OBJECTS backing Data Structure instead of a regular JAVA Data Structure. This Packed BIGINTEGER Class was implemented as a proof of concept for showing the benefits of using the PACKED OBJECTS Data Module.

Reference: Dr. Kenneth B. KENT · +1 (506) 451 6971 · ken@unb.ca

Sept. 2012–Aug. 2013 Help Desk Student Consultant, UNB
INFORMATION TECHNOLOGY SERVICES — Fredericton, New
Brunswick

*UNB Information
Technology
Services*

To provide first level technical support to users of information technology at UNB in a professional and positive manner, whether in person or by phone. Duties included; troubleshooting and software installation on Faculty, Staff and Student computers.

Reference: Scott CHAMBERLAIN +1 (506) 452 6018 · Scott.Chamberlain@unb.ca

May 2012–Aug. 2012 Student Level 1 IT Support (Co-op), UNB
FACULTY OF NURSING — Fredericton, New Brunswick

*UNB Faculty of
Nursing*

To provide first level technical support to users of information technology at UNB and the Faculty of Nursing in a professional and positive manner, whether on-site in departments, by phone or in writing. Duties included; inventory, troubleshooting, software installation and in some circumstances hardware installation on new and referred computers.

Reference: Tony LEWIS (W) +1 (506) 458 7630 · (M) +1 506 999 0514 · tlewis@unb.ca

May 2011–Dec. 2011 Software Research and Development
(Co-op), BLACKBERRY LIMITED (RESEARCH IN MOTION INC.) —
Fredericton, New Brunswick

*Blackberry Limited
(Research in
Motion Inc.)*

As a member of the Research & Development team for Chalk, a Subsidiary of Research in Motion Limited, my duties and responsibilities involved researching, writing, testing and maintaining source code for many different projects and products and to learn many new technologies quickly for new software projects.

Projects:

Mobile Chalkboard: Host Management Dashboard:
The Host Management Dashboard provided clients with the abilities to view and manage the wide range of software products hosted on their local servers. Written in C# .NET 4, ASP, MS SQL, XML and JSON.

Blackberry Catalyst Application:
The Catalyst Blackberry application for BB OS 4.5 7.1 provides device customers the ability to upgrade their mobile plan on the fly. Written with the Blackberry Java APIs for the client and a series of JBoss webservers with a REST call interface backed by HornetQ queues.

Reference: Ian DELONG (W) +1 (506) 460 4025 · (M) +1 506 292 5872 ·
idelong@rim.net

Sept. 2010–Dec. 2010 Software Verification and Validation
Specialist (Co-op), BLACKBERRY LIMITED (RESEARCH IN MOTION
INC.) — Fredericton, New Brunswick

*Blackberry Limited
(Research in
Motion Inc.)*

As a Software Testing Specialist for Chalk, a Subsidiary of Research in Motion Limited, my duties and responsibilities involved creating, running and modifying manual test cases as needed for the Mobile Chalkboard Application. Reference: Ian DELONG (W) +1 (506) 460 4025 · (M) +1 506 292 5872 ·
idelong@rim.net

Jan. 2010–April 2010 Student Level 1 IT Support (Co-op), UNB
FACULTY OF BUSINESS — Fredericton, New Brunswick

*UNB Faculty of
Business*

To provide first level technical support to users of information technology at UNB and the Faculty of Business in a professional and positive manner, whether at the laptop support counter, on-site in departments, by phone or in writing. Duties included; inventory, troubleshooting, software installation and in some circumstances hardware installation on new and referred computers. Reference: Dave KELL +1 (506) 458 7632 · dave.kell@unb.ca

Sept. 2009–Dec. 2009 Computing Response Team Member,
UNB INFORMATION TECHNOLOGY SERVICES — Fredericton, New
Brunswick

*UNB Information
Technology
Services*

To provide first and second level technical support to users of information technology at UNB in a professional and positive manner, whether in person or by phone. Duties included; troubleshooting and software installation on Faculty, Staff and Student computers. Reference: Scott CHAMBERLAIN +1 (506) 452 6018 · Scott.Chamberlain@unb.ca

May 2009–Aug. 2009 Student Level 1 IT Support (Co-op), UNB
FACULTY OF LAW — Fredericton, New Brunswick

*UNB Faculty of
Law*

To provide first level technical support to users of information technology at UNB and the Faculty of Law in a professional and positive manner, whether at the laptop support counter, on-site in departments, by phone or in writing. Duties included; inventory, troubleshooting, software installation and in some circumstances hardware installation on new and referred computers. Reference: Scott CHAMBERLAIN +1 (506) 452 6018 · Scott.Chamberlain@unb.ca

OTHER INFORMATION

Languages ENGLISH · Native language
 FRENCH · Limited working proficiency

July 19, 2017