

Jon Sangster

Computer Programmer

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PROFILE

- 15 years of professional programming experience, with particular knowledge in *Ruby on Rails*, *Java*, *C*, *Haskell*, and *agile* project management.
- Pursuing opportunities to make significant contributions, leading a small team in agile development while mentoring junior developers.

TECHNICAL SKILLS

- **Languages:** Ruby, Ruby on Rails, Java, JavaScript, Go, C, C++14, Haskell, SQL, Cypher, HTML, CSS, Lua, PHP, Python, \LaTeX , XML, Shell scripting
- **Agile:** Scrum, Agile Alliance “Certified Scrum Master”, Kanban
- **Database:** PostgreSQL, MongoDB, Neo4J, MySQL/MariaDB, SQLite
- **Operating Systems:** Linux (*ArchLinux*, *NixOS*, *Redhat/Fedora/CentOS*, *Gentoo*, *Ubuntu*), Android
- **Web Servers:** Nginx, Apache, Phusion Passenger
- **Version Control:** git, Subversion

WORK EXPERIENCE

Traction Guest *Senior Ruby Engineer* Vancouver, BC 2021–now

- Time will tell.

Spark RE *Senior Developer* Vancouver, BC 2018–2021

- Sole senior developer, leading a team of four intermediate and junior developers.
- Instituted a project management framework based on Agile methodologies, to support the needs of the growing development team.
- Created a universal “spreadsheet importer” for *Ruby on Rails*, allowing users to import any number of arbitrarily-related records via a single spreadsheet, into a *PostgreSQL* database. This importer featured a *React* UI, dynamically generated from the Rails’ models and the associations between them.
- Refactored the application’s E-Commerce software with a “line items” feature, allowing users to apply any number of taxes, discounts, addons, and other modifications to their inventory.
- Developed a *Node.js* microservice, employing *headless Chrome*, to convert webpages into PDFs, maintaining their look and feel.
- Developed a diskless “bulk download” microservice, allowing users to request dynamically-generated archives of their project files.

Ballistiq Digital Inc *Senior Developer* Montreal, QC 2014–2018

- Developed software for a variety of high-profile clients, including *Autodesk*, *NVIDIA*, *Riot Games*, *Luxion*, and *HP*.

- Created a conference management application which coordinated registration, housing, tax information, seminar and class enrolment, childcare, custom discounts, meal plans, and PDF name-tag generation for thousands of attendees.

This was a *Ruby on Rails* application backed by a *PostgreSQL* database, with a UI implemented with a highly customized version of *Active Admin*. Offline processes, such as name-tag generation and email dispatch were delegated to *Sidekiq Pro* via *Redis*.

- Architected an internal *ontology server* with *Adobe Experience Manager* to allow a large client to manage shared assets across their global platform.
- Implemented an ontology server for a client with many departments that independently create marketing and advertising websites to act as a “single source of truth” to ensure these sites all maintain up-to-date copy and assets.

This is a custom *node.js* backed by a *MongoDB* NoSQL database. It included custom middleware to Authenticate users against the organization’s Active Directory server via *SAML*.

- Adapted *Shopify’s* storefront to sell digital—instead of physical—goods. This included a custom API server to automatically deliver product keys to end-users upon payment verification, as well as an “embedded Shopify app” to allow the client to manage their serial code inventory directly from Shopify’s dashboard.

This project required a custom “serial-code provisioner” service implemented in *Ruby on Rails* and backed by a *MySQL* database. Serial codes were delivered to end-users with *Mandrill*.

Administration of the serial-code provisioner was implemented through a custom *Shopify Plugin*, also written in ruby. This allowed administrators to securely manage their inventory in the remote application directly from their Shopify console.

Unique Ltd *Senior Developer* Halifax, NS 2013–2014

- Led a *Scrum* project to replace a disparate collection of legacy *REST* services with a unified *Ruby on Rails* service.
- Implemented a service to communicate the volumetric data returned by *millimetre wave scanners* to that customer’s profile, allowing E-Commerce partners (such as *Levi’s* or *Bloomingdale’s*) to pre-select the garment size which fits them exactly.
- Created an E-Commerce *Wordpress* plugin to enable REST access to an the automated garment-fitting service.
- Incrementally improved legacy REST services to meet changing business requirements.
- Developed an *AngularJS* extension to allow partners to embed a profile creation wizard in their own E-Commerce site, allowing their users easy access to our garment-fitting service.

NTT Data/Keane *Senior Developer* Halifax, NS 2008–2013

- Implemented control and user-interface software so the custom hardware our client, *Pason Systems*, created for the operation of land-based oil derricks, including the *Automatic Driller*, *Electronic Drilling Recorder*, *Enhanced Pit Volume Totalizer*, *Rig Display*, and *SideKick*.
- Created many custom, skeuomorphic UI widgets to emulate the physical equipment which our *Java* applications replaced.
- Led a *Scrum* project to replace a simple drilling recorder with a touchscreen *charting interface* that supports multiple lanes and several traces per lane.
- Developed a module for the “Automatic Driller” system to safely stop the drilling operation if the Driller fails to stop it before the *Kelly drive* reaches the drill floor.
- Held the role of “Backup Client/Server & Reporting Domain Lead:” the first consultant to become a Backup Lead for one of our client’s domains.

CGI Group Inc *Consultant* Stratford, PE 2007–2008

- Code Support on five *UNIX* applications and Application Support of nine *UNIX* applications and one Windows application.
- Developed a Java service to incorporate legacy telecom systems into Bell's *One Bill* service. This project earned a perfect 10/10 in each of the twenty categories of the *Client Satisfaction Assessment Program* (CSAP) report. Recognized via the Kudos program for my work on this project.
- Involved in the local Java Special Interest Group and occasionally presented a seminar on introductory UNIX/Linux skills to newer employees.

St. Francis Xavier University *Technical Support* Antigonish, NS 2004–2007

- Provided support for all forms of technology on the university campus.
- Helped in 2005–2006 to launch the WebFX Open Source initiative, which updated all the lab computers on campus to dual-boot Linux along with Windows XP.

OPEN SOURCE CONTRIBUTIONS

- **xmonad-keybindings-query:** A Haskell library extending *XMonad*, to provide users with the ability to create keyboard-shortcuts that perform different actions, depending on what application has focus.
- **ffmpeg-filter_graph:** A RubyGem to create *ffmpeg* filter graphs, to facilitate complex audio/video processing on Ruby on Rails application servers.
- **img2pcd8544:** Convert images to a format suitable for the PCD8544 LCD controller.
- **libsangster_avr:** A convenience library for developing projects with AVR microcontrollers.
- **atmega328p-planter:** A machine which automatically waters and plant and controls its growlight on a schedule.
- **arduino-pong:** A toy Pong “arcade machine” using an *Arduino*, the LCD screen from the indestructible Nokia 5110, and simple components.
- **gtfs_reader:** A RubyGem which provides a simple API for parsing *General Transit Feed Specification* (GTFS) files.
- **gtfs_engine:** A *Rails Engine* which adds a RESTful API for GTFS feeds to a Ruby on Rails host application.
- **jsend_wrapper-rails:** A RubyGem for Ruby on Rails to render *JSend*-compliant JSON responses.
- **CodeMirror-Textile:** A *Textile* parser for *CodeMirror*, the in-browser code editor.
- **ppp:** A RubyGem which generates *Perfect Paper* one-time passwords.

EDUCATION

St. Francis Xavier University Antigonish, NS 2003–2007

- Completed 108 credits toward a Bachelor's Degree in Computer Science.
- Dean's List, 2006–2007
- Summer Research Assistant of department chair, Dr. van Bommel.

Dr. John Hugh Gillis Regional High Antigonish, NS 1999–2003
