Gregory P. Ward

3790 Royal Ave
Montreal, Quebec H4A 2M2
Canada

greg@gerg.ca
https://www.gerg.ca/

Overview

Objective

A technical leadership position that takes advantage of my extensive software development skills and experience.

Citizenship

Canada/U.S. (dual)

Programming languages

Python, Go, JavaScript, C, Java, Perl, Unix shells, C++

Technical skills and interests

- software analysis and design
- RESTful API design
- web application development
- SQL and relational database design
- containers and virtualization
- application security

Employment

Fibrenoire   Montreal, QC
Technical Lead (Software Development)   *March 2019 to present*

I am leading a team of developers building a new backend for Fibrenoire's customer portal. We are gradually replacing a legacy monolith with microservices using an API-first approach. My role encompasses architecture, design, implementation, and mentoring.

NoviFlow   Montreal, QC
Principal Solutions Engineer   *July 2018 to March 2019*

I contributed to the state of the art in SDN (software-defined networking) technology by implementing a proof-of-concept load balancer for carrier-grade NAT (network address translation). This work was done in close collaboration with industry partners, customers, and a tightly focused team.

Oracle; Dyn (acquired); Renesys Corporation (acquired)

Principal Software Developer (Oracle)   *January 2018 to July 2018*

Senior Software Developer (Oracle)   *April 2017 to December 2017*

Senior Software Developer (Dyn)   *May 2014 to April 2017*

Senior Software Developer (Renesys)   *July 2013 to May 2014*

I worked on Internet performance monitoring for Oracle Cloud Infrastructure. My team built and deployed two applications as part of Oracle's cloud service to present existing data products to customer-facing APIs, bridging the gap between Renesys' legacy data products and Oracle's cloud offering.

Pre-Oracle acquisition, I helped to change the development culture within my team to introduce automated tests, code review, and other best practices.

Intelerad Medical Systems   Montreal, QC
Staff Software Developer   *2003 to 2012*

In 2007, I became the company's first build controller. My first major project was to rewrite the build system using Buildbot, resulting in a more transparent, maintainable, and extensible system that ran builds 50% faster than its predecessor. Next, I tackled our main workflow, switching the company from CVS to Mercurial and simplifying many day-to-day tasks for developers. I also wrote a web application to expose the inner workings of R&D to the rest of the company.

Prior to that, I worked in the web applications team, maintaining and developing tools used by Intelerad's customers to administer their medical workflow and image management software (PACS). This was an interesting challenge due to undocumented requirements, low-quality and untested code, and a complex distributed runtime environment. We gradually tamed the beast and turned it into a maintainable piece of software for our successors. Also during this time, I worked on Intelerad's front-end diagnostic image viewer, a Java/Swing-based GUI application.

MEMS & Nanotechnology Exchange   Reston, VA
Software Developer   *1998 to 2003*

My responsibilities spanned requirements analysis, system architecture, design, implementation, testing, and deployment of a web-driven system for distributed semiconductor fabrication. Our team developed a web application that enabled customers to search a library of processing capabilites, construct a custom process sequence for fabrication, and track their process to completion. I also interacted extensively with the network's member fab sites to determine their processing capabilities and add them to our database.

Additionally, I shared responsibility for development and production infrastructure, including version control, testing frameworks, maintenance of developer workstations, database selection and design, web application server selection and design, and maintenance and security of our web/email/DNS servers.

McConnell Brain Imaging Centre, Montreal Neurological Institute   Montreal, QC
Programmer/Systems Analyst   *1993; 1994 to 1998*

I was involved in a wide range of the Centre's activities, focused on making scientific work more efficient and less error-prone. This mainly involved writing programs to automate repetitive procedures and writing an extensive Perl library for such programs (still in use 15 years later). In addition, I did some work on distributing large-scale processing across a network of workstations.

Education

McGill University   Montreal, QC
M.Sc. in computer science   *1998*

McGill University   Montreal, QC
B.Sc. in physics with a minor in computer science (graduated with distinction)   *1994*

Selected Open Source Projects

Fubsy
Currently under development, Fubsy is an efficient, scalable, practical build tool. It's strongly influenced by Make and SCons, but aims to be easier to use, more flexible, and faster.

vcprompt

A tiny command-line utility to incorporate information about version control working directories in the Unix shell prompt.

Mercurial (contributor)

I have contributed several fixes and a few small features to Mercurial, a popular distributed version control system.

cvs2hg

An alternative backend for `cvs2svn` that converts a CVS repository directly to Mercurial.

elspy

An extension to the Exim MTA (mail transfer agent) that embeds a Python interpreter, allowing the use of arbitrary Python code for scanning email before it is accepted by the SMTP daemon.

Optik

A flexible, extensible, easy-to-use command-line parsing library for Python. Included in the standard library since Python 2.3 as `optparse`.

Quixote (co-designer)

A lightweight web application framework designed specifically for simplicity and familiarity to Python programmers.

Python Distribution Utilities (distutils)

A framework that provides a standard way for developers to distribute Python modules and applications, making it easier for end-users and administrators to install and maintain them. Included in the standard library since Python 2.0.

btOOL

A comprehensive programmer's toolkit for processing BIBTEX data files, consisting of a C library for efficient low-level parsing and a Perl library for higher-level tasks.

See also:

- `http://hg.gerg.ca/`
- `https://bitbucket.org/gward/`
- `https://github.com/gward/`

Conferences, Publications, Training

- presented talks at PyCon Canada 2013, PyCon 2014, CUSEC 2015, PyCon 2015, PyCon Canada 2016, ConFoo 2017, and PyCon Canada 2017

- organized and co-taught the Montreal Python Workshop, a weekend workshop for non-programmers to learn the basics of programming (February 2013)

- presented a tutorial at PyCon Canada, Toronto, November 2012: "Fast, Faster, Fastest: Getting the Best Performance From Python"

- "Quixote: a Python-Centric Web Application Framework"; Linux Journal (online edition); July 22, 2002; `http://www.linuxjournal.com/article.php?sid=6178`

- member of the program committee for the Python track of the 1999 O'Reilly Open Source Convention and for the Eighth, Ninth, and Tenth International Python Conferences (2000, 2001, 2002)

- presented talks at the 1999 O'Reilly Open Source Convention and the Eighth International Python Conference, Arlington, Virginia (2000)