Bobby Powers

31 Beekman Ave. *+1 (914) 721-0083 (mobile)* *bobbypowers@gmail.com*
Croton, NY 10520 `http://bpowers.github.com` *January 5, 2013*

Employment

Dev Lead, Developer & Tech Operations Interim Lead, *SocialCode* Jan 2012-Present

I'm responsible for managing, implementing, debugging and scaling key systems at SocialCode. I am a team lead responsible for key parts of SocialCode's advertising platform. Concurrently, I am the interim lead for the operations team which builds and manages the EC2-based 100+ server infrastructure. I designed and implemented a service that handles over 60k HTTP requests per hour with 99.999% availability. In addition, I was one of two recipients of the first 'Stellar SocialCoder' quarterly award recognizing significant (positive) impacts on SocialCode.

Simulation and Software Developer, *Forio Online Simulations* Jan 2010-Dec 2011

I've been integral in scaling out, stabilizing and developing new features of Forio's Java-based platform for online, interactive learning environments. I designed and implemented a clustered configuration of our platform for an event serving all 800+ incoming MBA students at the Wharton School of Business, which performed flawlessly. Later, I worked on pulling a native-library dependency out of our webapp and into a standalone service written in C. This enabled us to move to 64-bit JVMs and removed a frequent source of app server crashes, while simultaneously reducing memory and resource usage.

Software Developer, *HART Technologies* June 2009-Dec 2009

I ported HART's core enterprise messaging framework to the ARM platform, quickly coming up to speed on a large C++ codebase. This involved identifying, debugging and subsequently fixing structure alignment and padding issues. I identified and resolved latency issues across an array of networked applications. Later I updated a Linux kernel patch-series for ARM PXA support from the 2.6.21 to 2.6.32 kernel, which was subsequently picked up by the OpenWRT Linux distribution.

Intern, *One Laptop Per Child* Summer 2008

I developed an activity for the Sugar platform that allowed children to do basic system dynamics modeling. Additionally I did a modest amount of work to support their platform release, including fixing an issue causing a 10+ second delay in activity startup time. After my internship I stayed involved, rewriting the Python-based boot animation code in C, resulting in a 35% increase in boot speed. This has been shipped on hundreds of thousands of laptops.

Selected Publications

Andrea M. Bassi, Robert Powers, and William Schoenberg. An integrated approach to energy prospects for North America and the rest of the world. *Energy Economics*, 32(1):30–42, 2010.

Charles Hall, Robert Powers, and William Schoenberg. Peak oil, EROI, investments and the economy in an uncertain future. *Biofuels, Solar and Wind as Renewable Energy Systems*, pages 109–132, 2008.

David Murphy, Charles Hall, and Bobby Powers. New perspectives on the energy return on (energy) investment (EROI) of corn ethanol. *Environment, Development and Sustainability*, 13:179–202, 2011.

Skills

langs 1	⁝C, ⁝Python, ⁝Go, ⁝bash, ⁝Javascript	langs 2	⁝Java, ·C++, ·Scheme, ·TEX, ·R, ·x86 asm
web	⁝MySQL, ⁝HTML, ⁝XML, ·CSS	build	⁝GNU Make, ·autotools, ⁝maven
protocols	⁝http, ⁝redis, ⁝sftp, ·ssh	scm	⁝git, ⁝svn, ·hg
2.6+ kernel	·MM, ·VFS, ·arm	libs	⁝glibc, ⁝gobject, ⁝GTK2, ·LLVM, ·Yacc
		legend	⁝expert, ⁝proficient, ·familiar

Bobby Powers

Education

Masters in System Dynamics, *University of Bergen, Norway* Jan 2008-Dec 2011
GPA: 3.9
Coursework Summary:

- System Dynamics Modeling
- Interactive Learning Environments
- Development Planning

Thesis: An Object-Oriented Approach to Managing Model Complexity <`https://s3.amazonaws.com/bpowers/thesis.pdf`>
Summary: System dynamics is teaching me how to understand complex systems and help others to do the same.

B.S in Environmental Studies, *SUNY College of Environmental Science and Forestry* Jan 2005-Dec 2008
GPA: 3.5 magna cum laude
Coursework Summary:

- Ecological and Geographical Modeling (Fortran, C#, C++) and GIS (IDRISI, ArcGIS)
- Ecology and Biophysical Economics
- Policy Analysis

Summary: At ESF I learned how to apply my passion and talent for computers towards answering relevant questions.

Computer Systems & Electrical Engineering, *Rensselaer Polytechnic Institute* Aug 2002-May 2004
(transferred to SUNY ESF)
Coursework Summary:

- Software Development (C++) and Engineering Design
- Management Principles

Summary: At RPI I learned engineering rigor and the basics of managing successful projects.

Projects

Programming, *various* 2002-present

I have worked on a personal music serving platform - similar in spirit to Google Music, compilers in C, Python and Clojure, a Win32 minesweeper implementation in assembly, several network protocols, robotic control software, a flash pie-chart library, and numerous one-off scripts for myself and friends.

I am contributor on the Apache MINA project, supplying a number of fixes to the Java sftp implementation. I've also contributed bug fixes to the Linux kernel, Git version control system, Go programming language, and numerous smaller free software projects. I like to leave things better than how I found them.