

Jennifer M. Selby

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Experience

Girls Who Code, Teacher

Summer 2013 San Francisco, CA

Taught an 8-week full-time immersive programming survey course to 20 high school girls. Topics included programming abstractions (Scratch), robotics/AI (Python), graphics and animation (Processing.js, Adobe PhotoShop), web and UX design (HTML/CSS/JavaScript, jQuery), mobile design and entrepreneurship (jQueryMobile), and physical computing with Arduinos (C).

NCWHL, Web Programmer (Volunteer)

2011-present Berkeley, CA

Rewrote HTML/CSS/JavaScript of women's ice hockey league website to better match current best practices. Working on Django-based webapp for registering players, scheduling games, and recording game results.

Nokia, Senior Software Engineer

2011-2013 Berkeley, CA

Wrote part of a numerical optimization C++ library. Extended and experimented with statistical modeling code in a combination of Python, Java, and R.

YMCA Y Scholars, Tutor/Mentor (Volunteer)

2005-2012 Berkeley, CA

Assisted high school students, primarily in math and science subjects.

pMDsoft, Software Developer

2010-2011 San Francisco, CA

Updated a Java Struts-based web application using AJAX (Prototype). Began work on porting a BlackBerry/iPhone application to the Android platform. Provided customer support.

Navia Systems, Software Engineer

2009 - 2010 Berkeley, CA

Implemented and tested Bayesian generative probabilistic models in a novel, Church-like programming language (Monty), with Python wrappings. Developed a django-backed web interface and cairo- and OpenGL-based visualization APIs for a prediction and multilevel clustering tool. Ran large-scale data analyses using Hadoop on Amazon Elastic Map Reduce EC2 machines with the Dumbo Python library.

Metacarta, Software Engineer

2004 - 2009 Cambridge, MA

Implemented, trained, validated, and improved Bayesian statistical models used in natural language processing, working primarily in C++ and Python. Maintained large PostgreSQL database of geographical information and training data. Developed command-line tools in Python, Perl, and bash for configuring and testing SSL, Active Directory, Samba, and Kerberos. Worked on systems for managing and securing document repositories in Python.

Sun Microsystems, Software Engineer

2003 - 2004 Burlington, MA

Developed system management software for the Sun Fire family of servers. Designed, developed, and documented, extensible tools for embedded data storage. Worked mostly in C++ and ksh.

MIT Information Systems, Junior Developer

2001 - 2003 Cambridge, MA

On Kerberos Development Team, updated and reorganized the user, system administrator, and installation guides, synchronizing the C code and documentation as necessary. Worked on some automation tools in Tcl and Expect.

MIT SIPB, Instructor (Volunteer) *2003, 2004, & 2005 Cambridge, MA*
Co-taught a two-week “Crash Course in C”.

MIT Experimental Studies Group, Teaching Assistant *2001 & 2003 Cambridge, MA*
Taught tutorials and graded exams: Structures & Interpretations of Computer Programming (Scheme).

Personal Computer Assistant *2002 Cambridge, MA*
Assisted disabled professor in preparing an Operating Systems class at Tufts University.

MIT Experimental Studies Group, Calculus Instructor *2000 Cambridge, MA*
Co-taught freshman calculus. Gave lectures and wrote and graded tests and problem sets.

Digital Systems Incorporated, Junior Systems Analyst *2000 Westminister, PA*
Maintained company workstations, wrote technical documents, and researched migration of software to other platforms.

Education **University of California, Berkeley** *2007-2009 Berkeley, CA*
Independent of degree program

Coursework: Linear Algebra (MATH110), Intro to Probability and Statistics at an Advanced Level (STAT 202A & 200B) (R), Biostatistical Methods (STAT C245C) (R, Bioconductor)

Massachusetts Institute of Technology *1999-2003 Cambridge, MA*
B.S. in Computer Science and Engineering

Selected Coursework: Operating System Engineering (C, i386 assembly), Network & Computer Security (various languages), Digital Systems Laboratory (VHDL), Microcomputer Project Laboratory (MCS assembly)

Activities Ice hockey coach, skater, goalie, and referee in various leagues around the SF Bay.
CrossFit enthusiast.