Jacob L. Mandelson **jacob@mandelson.org**

Systems software developer Networking and distributed systems

Areas of expertise:

* Primarily C and Scala, also proficient in C++, Java, and Python.
* Low-level Unix & Linux system and network programming.
* Design and development of distributed/concurrent systems.
* Natural language processing and internationalization.

US Patent 7680648 - Text segmentation rescoring using web corpus frequencies

Employment history:

2010-2013: Midokura KK (Tokyo) and Midokura USA Inc. (San Francisco, CA)
MidoNet: Design and implementation of a "virtual router" networking component of a network virtualization distributed system. Design and implementation of a multi-component networking simulation and multi-threaded network simulation framework to run it.

2004-2010: Google (Santa Monica, CA)
AdSense for Domains: Improved the generation of precomputed transforms and the handling of misspelled words in domain name segmentation. Added support for multiple languages. Migrated technology from an acquisition to Google's codebase.
Related Link Units: Improvements to the link clustering and the management of offensive terms filters, increasing automation and reducing latency.
Content Ads Infrastructure: Designed and built an internal diagnostic tool for exposing the AdSense decision pipeline to support personnel.
Active in establishing an engineer mentoring program for new hires to the Santa Monica office.

2002-2003: Overture Services and Yahoo (Pasadena, CA)
Conversion of web search and advertiser listings systems to the Japanese marketplace.

2000-2002: Fulcrum Microsystems (Calabasas, CA)
Wrote reference compiler for an asynchronous processor target.
Designed a hardware simulation framework allowing integrated circuit simulations to run different components at different fidelity levels.

1998-2000: Green Hills Software (Santa Barbara, CA)
Device drivers and instrumentation of kernel and userland on INTEGRITY, a PowerPC-based embedded real-time operating system (RTOS).

Internships:

1997: First Quadrant Corp. (Pasadena, CA)
Financial software development with relational database access.

1995-1996: Caltech (Pasadena, CA)
Undergraduate research assistant performing cross-platform Unix daemon development for research in task distribution in wide-area distributed systems.

1993-1995: MITRE Corp. (McLean, VA)
('93-94) Implementing and optimizing a communication protocol simulator using the OpNet simulator framework.
('94-95) Administration of a small network of Solaris database servers and Windows workstations.

Education: Bachelor's Degree in Engineering and Applied Science (Computer Science) from the California Institute of Technology (Pasadena, CA), June 1998.