

## Joseph F. Miklojcik III

56 Freemont Court  
Somerset, NJ, 08873

732-754-1003  
jfm3@jfm3.org

### Employment

#### Member of Technical Staff

S7 Labs LLC

February 2011 - Present  
New York City, NY

- Wrote middleware between full text search engine and `songza.com` (Python, Xapian).

#### Senior System Administrator

Shopwiki Inc.

April 2009 - February 2011  
New York City, NY

- Supported entire infrastructure from crawling to user facing applications (Java, C++, Python) on 200 machines in two data centers. Analyzed, monitored, and improved performance, availability, and capacity.
- Ran Terabyte scale MySQL, MongoDB, and file systems in various software and hardware RAIDs (`ext3`, `ext4`, `md`, `3ware/LSI`).
- Automated installation infrastructure (Anaconda, Kickstart) and monitoring infrastructure (Nagios, Munin). Maintained in-house monitoring system (Java).
- Configuration and maintenance of load balancer (ZXTM), geo-located DNS (UltraDNS), external site testing (Websitepulse).
- Managed Amazon EC2 instances, AMIs, EBS volumes, and S3 storage. Implemented backups and archives for 5TB of MongoDB and MySQL to Amazon S3 storage.

#### Owner and General Manager

Nectarine City LLC

May 2006 - Present  
Somerset, NJ

- Provided hundreds of billable hours of FOSS IT consulting services and reports at hourly rates.
- Wrote "Nectarine City Handbook of C Programming Style."
- Everything else.

#### Senior Software Engineer

WINLAB, Rutgers University

September 2006 - April 2009  
North Brunswick, NJ

- Maintained ORBIT (`orbit-lab.org`), a 400 node grid of computers running Linux (2.6.x, netfilter, frisbee), used for performing wireless network research.
- Maintained NodeHandler/NodeAgent; RESTful web services for operating the ORBIT grid (Ruby 1.8, SBCL 1.x, MySQL 5.x, PostgreSQL 8.x). ORBIT software installs 400 nodes with full Linux application stacks in under 8 minutes, and provides a RESTful control framework for managing highly distributed experiment software.
- Virtualized experiment control infrastructure (Xen 3.x), including mechanisms for collecting GB of experiment data from the 400 node grid.
- Wrote firmware for second generation node hardware control (C99, uIP, ARM, GCC 4).
- Wrote graphic console for visualizing real time experiment results from USRP software-defined radio devices (C99, UDP).
- Provided basic computing infrastructure for WINLAB, including email, web, file, and print services (Ubuntu 7, 8), Trac (9.x, 10.x), and an openMosix cluster.

#### System Programmer

Rutgers University

November 1997 - September 2006  
Piscataway, NJ

- Led team of eight student system programmers to maintain 700+ package repository at `rpm.rutgers.edu`. Ported this packaged software to Solaris 7, 8, and 9. Made significant improvements to several Open Source projects, including OpenLDAP, YUM, and FAI. Maintained in-house PAM modules (Python, C).
- Mentored other system administrators at University.

- Consulted for thousands of hours throughout the University's hundreds of departments; everything from multi-year plans with \$300K budgets to amateur psychotherapy and pulling cable. Departments ranged from Libraries to Medical Research labs. (Solaris 7, 8, 9, NFS, RHEL 3, Debian 2.x, netfilter, Perl 5.x, PHP 3.x, Postfix, OpenLDAP, OpenSSL, OpenSSH)
- Designed and implemented automated system administration tools for Solaris systems (`cfengine`, RPM, APT, NAGIOS, JumpStart, Kickstart, SystemImager). These tools allowed four full time system administrators to run between 100 and 200 servers for 70,000 users.
- Administrated Solaris systems for Administrative Services (Solaris 7, Oracle 7x, 8x, ADSM, DiskSuite). Supported two DBAs and four Developers in traditional SA role on systems with tens of thousands of users, meant to migrate away from a Mainframe. Devised disaster recovery plan. Passed University audits at record levels, and wrote "best practices" documents.

### Software Engineer and Technical Writer

May 1995 - October 1997

Pipeline Associates

Parsippany, NJ

- Wrote `setpagedevice` paper handling code for Powerpage, a Postscript interpreter (K&R C, C90, Postscript L2/L3).
- Ported Powerpage to four different compiler/hardware platforms. Worked with QA group to ensure port correctness.
- Consulted for Pipeline customers, integrating Powerpage into seven distinct printers. Worked closely with customer engineering teams.
- Wrote three engineering manuals for the Powerpage line of products; an Integration Guide, a Programming Style Guide, and a detailed Product Overview. These were used both by customers and as marketing material.
- Wrote scripts for automated regression tests, working closely with QA department (PostScript, bash, C). Developed and documented strategies for best use of Genoa PostScript test suite results (PostScript, bash, C).

### Member of Technical Staff

August 1988 - August 1994

Unipress Software

Edison, NJ

- Maintained Unipress Emacs, Cmacs, and Adamacs (K&R C, MLisp).
- Wrote a portable extension language interpreter close to R3RS Scheme, including an efficient garbage collector (K&R C) and non-blocking I/O facilities.
- Ported over five software products between Solaris, HPUNIX, AIX, IRIX, and many other versions of UNIX during the early UNIX Workstation craze. Made C/C++ developer kits for UNIX workstations, including correctly built X11 and OSF/Motif libraries (K&R C, POSIX.x).
- Evaluated tens of software products as Unipress considered buying the rights to resell them. Worked closely with business/marketing teams.
- Wrote an instrumented C Compiler, which generated self-testing object code. (K&R C, various parser generators).
- Editor of *Unipress Emacs User Guide* and *Unipress Emacs Reference Manual*, over 1000 pages of documentation. Authored regular Unipress Technical Bulletins, reference cards, release notes, and per-version install instructions. (Framemaker 3.0, 4.0)

### Education

Rutgers University

New Brunswick, NJ

BA with Honors in Computer Science, 2005

References available on request.