

Matthew J. Collins
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Professional Summary

Eighteen years of experience using computers to solve problems alongside scientists. Versed in the practices of both writing software and administering computer systems. Able to meet high availability and performance standards through the creative application of proprietary and open source software. Fourteen years of experience leading technical teams and projects.

Professional Experience

Senior Systems Programmer

May 2010 – Current

Advanced Computing and Information Systems Laboratory, University of Florida, Gainesville, FL

Infrastructure software developer for lab's grant projects. Senior system administrator for computer engineering academic research laboratory specializing in cloud and virtualization systems.

Key Activities

- Develop open-source software to provide interfaces to the iDigBio data store for scientists and provide training and outreach to biologists to increase use of iDigBio in research
- Serve as the interface between the disruptive computing environments needed for cutting-edge research and the broader campus production and research systems
- Maintain the facilities and configurations of over 260 servers running cloud, distributed, and virtualization environments such as Elasticsearch, VMware, XenServer, OpenStack, and Ceph
- Provide on site support and local coordination for NSF funded multi-site research grants including iDigBio, PRAGMA, FutureGrid, GatorCloud, PlanetLab, and ExoGENI
- Mentor computer engineering graduate students in the technical aspects of their research

System Consultant

March 2009 – December 2012

Bear Code, LLC, Montpelier, VT

Part-time consulting system administrator for international software development company.

Key Activities

- Migrate web hosting environments from virtual private servers into per-customer Amazon EC2 Virtual Private Clouds

System Administrator

January 2008 – May 2010

Florida Museum of Natural History, University of Florida, Gainesville, FL

Lead system administrator for research/business environment with 300 staff and 40 Linux and Windows servers.

Key Activities

- Create, prioritize, and complete projects like virtualization and SAN storage that add new capabilities to museum staff and provide support for grant projects
- Design and maintain software development environments for team of 6 programmers and web site managers
- Supervise and mentor assistant system administrator and interns

System Administrator**April 2007 – January 2008***Bureau of Economic and Business Research, University of Florida, Gainesville, FL*

System and workstation administrator for business environment with 250 staff, Linux and Windows servers, and 120 Windows workstations.

Key Activities

- Modernize aging infrastructure with virtualization for servers and Ghost workstation deployment
- Upgrade and maintain Asterix-based VoIP system for 80 station call center

Lead Programmer**September 2005 – April 2007***Florida Museum of Natural History, University of Florida, Gainesville, FL*

Lead developer on NSF funded BioCorder grant project. Quarter-time system administrator.

Key Activities

- Author web application for storing and sharing genetic laboratory data in PHP/PostgreSQL
- Coordinate work from programmers and principal investigators from other institutions
- Lead special projects aimed at modernizing IT infrastructure like automated build systems

System Administrator, Programmer**June 2001 – August 2005***Signal Advertising, Inc., Montpelier, VT*

System administrator and software developer for Internet development business.

Key Activities

- Design Linux-based infrastructure to provide ISP services at 99.99% availability (web hosting, email, database, custom applications, etc)
- Manage infrastructure and relations with multiple Tier IV data centers
- Author bespoke web applications in PHP/MySQL including e-commerce and data aggregation
- Provide development framework and core code to 3 person development team

Database Specialist**May 1997 – June 2001***Stone Environmental, Inc., Montpelier, VT*

Use desktop software and scripts to manage and present environmental data for reporting.

Key Activities

- Collect, normalize, and present weather, soil, and hydrologic data in EPA reports for pesticide regulation
- Develop software to perform hydrologic modeling and spatial analysis with ArcView GIS
- Author and support application for managing municipal septic systems

Education

M.S. Industrial and Systems Engineering

expected May 2016

University of Florida, Gainesville, FL

B.S. Civil Engineering with Environmental Option

May 1997

University of Vermont, Burlington, VT

Selected Service and Awards

Staff advisor of UF Data Science and Informatics student organization

Data Carpentry & Software Carpentry Workshops: NESCENT '14, iDigBio '15, University of Miami '15, South Florida University '15

Divisional winner of 2013 University of Florida Superior Accomplishment Award

Attendee of OSCON '06, LISA '08, SELF '11, SC '11, SC '12, QUBES '14

Github: <https://github.com/mjcollin>

Skills

Experienced with RedHat Enterprise Linux, CentOS, Ubuntu, OpenSolaris, Windows 2008 Server, Windows 2012 Server, TCP/IP networks, firewalls and NAT, proxy servers, load balancers, software defined networking, DNS, IPMI, PXE, SNMP, Apache, Lighttpd, MySQL, PostgreSQL, Bind, Postfix SMTP server, Zimbra, Git, Subversion, Redmine, Drupal, Zabbix, Foreman, Puppet configuration management, PHP, Python, R, Bash, Java, NodeJS, MATLAB, Riak, Elasticsearch, Cloudera, Hadoop, Ceph, Swift, CloudStack, VMware Vcenter and ESX, Citrix XenServer, NFS, ZFS, Active Directory, Windows Terminal Server, IBM fibre channel SAN, IBM blade centers, Dell blade centers, iDataPlex, Cisco, Dell PowerConnect, Brocade, Pica8, Force10.