

Kevin D. Lux

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An accomplished Software Engineer specializing in research & development and process automation, with extensive experience in applying full life cycle software design principles to scientific projects with emerging requirements.

Summary of Qualifications

- Expert knowledge of multiplatform programming languages such as Perl, .Net and Java, including the expertise to integrate them.
- Excellent data analysis and modeling skills in MySQL, Oracle, SQL Server, XML and HL7.
- Exceptional ability to quickly learn and apply new skills to a wide range of problems.

Education

Master of Science, Computer and Information Science, University of Pennsylvania, Philadelphia, PA
Bachelor of Arts (Cum Laude), Computer Science, Drexel University, Philadelphia, PA

Technical Expertise

Microsoft Certified Solution Developer / Systems Engineer

Languages	Perl, C#, PHP, ASP, Java, C, XML, Javascript, HTML, Visual Basic
Systems	Windows (95,98,2000,XP,2003), Linux, Solaris, OS X
Software	Visual Studio, SeeBeyond Suite, Visio, JBuilder, Word, Excel, Powerpoint, Dreamweaver, CVS, Visual Source Safe
Database	mySQL, SQL Server 2000, Oracle, Perl DBI, ODBC, JDBC
Services	Apache, mod_ssl, Samba, sendmail, NTP, IIS, bind, DHCPd, ipchains/iptables,

Professional Experience

University of Pennsylvania, Philadelphia, PA

Senior Programmer Analyst

2004-Present

Lead all data integration activities between various hospital data sources (e*Gate HL7 datafeeds, Oracle/MySQL databases, proprietary software) and our customer Oracle/MySQL databases. Responsible for “special projects” programming such as process automation and hardware/software integration. Defined and built several clinical data web applications for scientific research.

- Initially setup and grew data feed collection to support IDX REG & SCH, Cerner Millennium and lab orders, creating a Perl infrastructure to synchronize databases, provide secure web service access, generate custom reports and systems monitoring.
- Built custom desktop applications in C# that automated a lab’s decision tree process, incorporating a variety of data sources and another application that interfaced with a barcode printer to output custom labels.
- Designed, created and maintain HIPAA-compliant, clinical data web applications in Java/Struts/Oracle that provide secure access to patient registries, bulk lab results and clinical studies.
- Building the WASP (Web Application and Schema Producer) web application using object oriented Perl. The system makes it simple to create a web front-end, database backend and linkages between the two entirely on the web or derives the information from sample data. The system features role-based and acl-based security.

Gloucester County College, Sewell, NJ
Adjunct Professor of Computer Science

2007-Present

Teach programming classes to undergraduate students in the evening.

- Taught CSC-101, "Introduction to Programming", introducing students to basic programming concepts using VB.NET.
- Taught CIS-110, "Fundamentals of Programming", which is quite similar to the above.
- Taught CSC-111, "Intermediate Programming", expands on the above to include array processing, file I/O and basic object oriented programming.
- Taught CSC-201, "Programming in C", introducing students to basic through intermediate concepts of the C programming language.
- Taught CSC-205, "Programming in C++", expanding on the above class to use object-oriented development and focusing on designing software.
- Taught CSC-220, "Data Structures and Algorithms", introducing students to stacks, queues, linked lists in both C and C++, along with basic algorithm analysis.
- Taught CIS-264, "[Web] Database Applications Programming", using PHP and MySQL to build database-driven web sites.

University of Pennsylvania, Philadelphia, PA
Research Programmer

2001-2004

Built a prototype email replacement using C# web services, web services enhancement (WSE) pack, SQL Server 2000 and mathematically provable security features. Experimented with biometrics, SSL, VPNs, x.509 certificate authorities, network tools (ethereal, snort, hogwash, iptables, etc.). Managed all lab resources to ensure security of systems, appropriate remote access, custom network and system configurations for experiments.

- Created WSEmail (<http://wsemail.ws>) to explore an alternative to traditional email that allowed for security (X.509 signatures and federated identities), adaptability (negotiation for communication channels) and extensibility (downloadable new functionality), resulting in an IEEE publication.
- Rewrote, in Perl, an OpenSSL-based certificate authority to interface with the University's data warehouse to provide positive identity credentials for secure file distribution.
- Setup, hardened and maintained Linux, BSD and Windows 2003 servers to provide web hosting/SSL service, IP routing testbeds, PPTP VPN and IPSEC access and application sharing via terminal services.

Consulting Experience

- Created a Perl-based web crawler to parse and store data from a social networking website in an Access database for social science research.
- Wrote a Perl script to collect system logs via various transports (ftp, smb and ssh), parse usage data out of them and upload the YAML formatted results to a web service for automatic billing.
- Transitioned an ASP/Access web application to PHP/MySQL, converting all data to UTF8, creating a relational data schema and adding new functionality to solicit new database records.
- Converted data stored in a Joomla-based CMS to a Drupal-based CMS and updated templates to match the old installation.
- Transitioned a static HTML website into a Drupal-based CMS (programmatically).

Web Sites

- <http://kevinlux.info/> - my professional information site. Contains the latest version of this document.
- <http://www.bernadette-peters.com/> - fan site for the Broadway actress (MySQL backend, Perl/CGI scripting, Apache)