

Job Descriptions of OSS Contributors

Information Technology Specialist IV/V
(Software Developer/System Administrator)

The Auburn University Libraries (AUL) is accepting applications for a Software Developer/System Administrator. This position is part of the Information Technology (IT) suite. It is based in the AUL Systems Department and reports to the Senior Software Developer in that department.

DUTIES: Develops library-oriented software applications as needed, a duty that may include modifying and adapting open-source software applications or utilities; writes custom scripts for routine library functions; works with Auburn University Libraries faculty and staff on digital library projects requiring in-house coding; works with faculty and IT staff from other university departments on related projects, including an institutional repository (IR) and undergraduate research journal; serves as a backup System Administrator. In this capacity, helps Systems staff manage the Library's Linux and Windows servers, including software upgrades and patches, security, and backup. Installs, configures, maintains, and (if necessary) extends third-party software applications (e.g. Integrated Library Systems, digital content-management software, document-delivery software); helps maintain an in-house Wiki on various aspects of library IT; shares a rotating weekly schedule of evening and weekend on-call duty; serves on university committees as needed and represents the Auburn University Libraries at the state, regional, and national levels.

REQUIRED QUALIFICATIONS: Thorough knowledge of at least one high-level programming or scripting language (e.g. Java, C#, C, C++, PHP, Perl, Python, Ruby) and experience developing custom applications using at least one of these languages. Experience with modern version-control software (e.g. Subversion, Git, Mercurial). Experience administering Linux servers, including shell scripting; or the ability to learn how to administer servers with these operating systems. Ability to clearly document all software development projects and programs. Effective written and interpersonal communication skills and the ability to interact professionally with a diverse group of users and support staff. Proven ability to successfully initiate, track, and manage multiple detail-oriented projects simultaneously. High school diploma or equivalent plus at least 6 years relevant experience as a software developer, database designer or administrator, and/or System Administrator. Employer will consider advanced degrees in lieu of experience.

DESIRED QUALIFICATIONS: Experience developing custom applications in a wide variety of programming languages. Experience planning, implementing, and/or maintaining an institutional repository (IR) using DSpace or another IR package (e.g. Fedora). Experience working with open-source software for next-generation library catalogs and discovery tools (e.g. VuFind, Blacklight, Koha, Evergreen). Experience in database administration (e.g. Postgres, MySQL, Oracle, Solr). Experience in structured software testing and quality assurance. Experience working in an academic library environment, especially experience with digital library projects. Preferred educational level: Four-year college degree in computer science, MIS, or a related field.

North Carolina State University is a land-grant university and a constituent institution of The University of North Carolina

NCSU Libraries
Campus Box 7111
Raleigh, NC 27695-7111

NC STATE UNIVERSITY

An Equal Opportunity/Affirmative Action Employer

Personnel Services
919-515-3522 (phone)
919-513-2972 (fax)
<http://www.lib.ncsu.edu/>

NORTH CAROLINA STATE UNIVERSITY LIBRARIES
DIGITAL TECHNOLOGIES DEVELOPMENT LIBRARIAN
VACANCY ANNOUNCEMENT

The NCSU Libraries has a well-earned reputation for creating adventurous library spaces and innovative services that delight today's students and researchers. The D. H. Hill Library combines the best of tradition and innovation, housing special collections and a beautiful gallery alongside vibrant, experiential spaces such as the [Learning Commons](#) and [Technology Sandbox](#). Soon we will open a magnificent new library that promises to be nothing less than the best learning and collaborative space in the country. Located on NC State's Centennial Campus, the [James B. Hunt Jr. Library](#) will be an iconic space, a place where people gather to explore new ways to research, learn, experiment, collaborate, and affect the world. Designed as a working incubator for educational technology, the Hunt Library will serve as a second "main library," complementing the D. H. Hill Library, with services focused on the [Centennial Campus](#) community. If you are a person who would like to provide a new generation of library users with everything they can imagine and more, consider applying for the following position.

The NCSU Libraries invites applications and nominations for the position of **Digital Technologies Development Librarian** in the Digital Library Initiatives department. Digital Library Initiatives develops and delivers an information environment that significantly advances end-user resource discovery and use of library services. As a member of the Digital Services Development group, the Digital Technologies Development Librarian works as an active member of a team that advances digital library services through applied research and application development, and manages the entire life cycle of projects, from requirements gathering to deployment.

Responsibilities

The Digital Technologies Development Librarian provides technical leadership and hands-on programming expertise for a portfolio of digital library projects. In close collaboration with technical and non-technical partners across the Libraries, she or he identifies emerging technologies that have potential for new and improved library services. Working both independently and in team settings, the incumbent develops functional prototypes of new digital library services through an iterative, data-informed, and test-driven process that emphasizes performance, sustainability, and usability. The Digital Technologies Development Librarian maintains and provides enhancements to existing digital library applications and collaborates closely with Information Technology staff to develop and maintain supporting infrastructure. The incumbent participates in library planning and serves on library-wide committees, task forces, and teams. NCSU librarians are expected to be active professionally and to contribute to developments in the field. Reports to the Lead, Digital Services Development

Required qualifications:

- ALA-accredited MLS or equivalent advanced degree
- Server-side application development experience with one or more open source programming languages such as PHP, Python, or Ruby; as well as SQL
- Database development skills
- Evidence of ability for ongoing professional development and contribution

Preferred qualifications:

- Knowledge of user-centered design processes, including user studies and usage data analysis
- Experience using client-side web technologies including JavaScript and CSS, HTML5, and related technologies.
- Experience in mobile application development and knowledge of mobile design principles
- Familiarity with version control systems such as Git or Subversion
- Experience working on or contributing to open-source software projects
- Experience working in an academic library

Sr. Software Engineer

The Sr. Software Engineer plays a central role in the ability of the library to cater technical solutions to the needs of the university in its mission to advance scholarship, learning and research. This position proactively architects reliable back end data services and infrastructure which anticipates the evolving information needs of students and faculty members. Responsibilities include the design and implementation of scalable applications and software components, engagement with library constituents in negotiating the diverse research and learning needs of the university, as well as communicate with and educate library staff, faculty and administrators regarding emerging trends in technology in order to meet goals and strategic initiatives. Incumbents also have the responsibility to research as well as implement current trends and innovations in both library technology and technical industry best practices and standards. The position also requires a high degree of accountability, and thus requires that individuals working in this position manage project time lines, deliverables, and resources to ensure that planned objectives are met.

The Sr Software Engineer:

- Designs, implements, tests, deploys and supports a wide range of software applications in support of core library objectives
- Architects and implements robust and dependable infrastructure components, data services, and software integration services
- Engages with library faculty and staff, university teaching and research faculty, as well as students at all levels in order to ensure that library software and web related services are meeting the needs of the library and the university
- Plans and manages project tasks, updates documentation, works with quality assurance and usability professionals.

Requires a Bachelor's degree in computer science, or combination of Bachelor's degree and relevant experience.

Requires knowledge of programming in Ruby and Ruby on Rails; High degree of experience with web technologies and standards such as HTML, CSS and Javascript; Database schema design; SQL; Strong knowledge of object oriented design and implementation; basic linux systems administrative skills; experience with web based APIs; systems integration skills; use of version control system such as git; some experience with test driven development; strong verbal and written skills requires. Knowledge of programming in the areas of PHP, Perl, Java, advanced knowledge of software testing; shell scripting; XML/XSLT; JSON; Coffeescript; SASS; jQuery.

UI Software Engineer

With a focus on user interface design, we are seeking a web and mobile application developer for digital collections, research data, and library digital services. This position will leverage both programming and graphic design skills to design and develop digital exhibits, research data visualizations, and digital media portals for the web and mobile devices. The incumbent will work closely with other applications developers to integrate these elements into web sites using Ruby on Rails, CSS, JavaScript, HTML5, and other emerging web technologies. Mobile application development will focus on responsive web design, but may include native iOS and android application development as well. Mobile applications are increasingly important to collect, organize, and share data while conducting research and learning.

This position will participate in cross departmental and organizational groups with partners from the Center for Research Computing (CRC), Academic Technologies, OIT, University Archives, researchers, and Hesburgh Libraries to support research and collection management throughout campus. A major focus of this position will be on improving library services through user interface software engineering. The incumbent will help to support key library discovery applications and related electronic resources.

In collaboration with universities such as Stanford, Virginia, and Northwestern, the incumbent will also contribute to an open source project called Hydra (<http://hydraproject.org>) that was formed to pool our resources to create groundbreaking digital library tools for ourselves and for the wider community. Faculty, researchers, students, and staff utilize these Hydra solutions for preserving data, managing descriptive information, and sharing of research information mandated by grant funding agencies such as NSF.

The UI Software Engineer:

- Designs and develops user focused parts of ruby on rails applications including graphical elements, user interfaces, and other application elements for digital exhibits, digital library services, and discovery applications. Integrates responsive web design into web sites to support mobile devices; creates mobile targeted websites; creates native iOS and Android applications.
- Works with other applications and digital library infrastructure developers, designs front end solutions and orchestrates interactions with services including metadata management, digitization workflows, image transformation, etc.
- Develops digital infrastructure services
- Participates in conferences, committee meetings, and planning meetings with partners on community projects.

Required Qualifications:

- 1+ years experience with a modern web framework e.g. Ruby on Rails, Django, Play, or Symphony
- Intimate knowledge of JavaScript, HTML, and CSS
- 1+ years experience developing with relational databases such as MySQL, PostgreSQL, or Oracle

Preferred:

- Understanding of the elements of art and the principles of design
- Knowledge of HTML5 and CSS3
- Ability to design and implement responsive web pages and applications interfaces
- Experience with JavaScript visualization tools like D3, Raphaël, TimelineJS, etc.
- Experience with JavaScript mapping tools like Leaflet, OpenLayers, or the Google Maps API
- iOS or Android application development experience
- Experience designing HTTP interactions that employ the correct verbs and status codes
- Experience working on a team that employs the agile development process
- Strong analytical, reasoning and problem resolution skills and demonstrated success in applying technology to meet user needs
- Ability to handle interpersonal communications tactfully and accurately with a diverse community of users and vendors
- Ability to work independently and in close conjunction with others in a team-oriented setting
- Ability to learn and master new skills and technologies quickly
- Experience with Fedora Commons Repository, iRODS, LOCKSS, or other preservation system
- Experience utilizing Apache Solr or Lucene indexes

Requires Bachelor's Degree in Informatics, Information Science, or equivalent experience in end user applications design.

In addition to strong application development skills, we are also looking for someone with strong design instincts to create polished user interfaces for interacting with our unique resources within our digital repository.

2 openings

Systems Developer / Engineer Non-SAP

Working Title: Applications Developer

Job Code: 8189

Classification: A&P (non-SAP)

Position #: TBD

Hours/Shift: 8 a.m. – 5 p.m.

Position Organization: 32015 Information Technology

Work Location: 18th Ave Library

Reports to Position #: 00061038, Head, Applications Dev/Support

Summary of Duties:

University Libraries are seeking an Applications Developer for the Applications Development & Support (AD&S) department in the Information Technology Division of the University Libraries. As a member of the AD&S team, the successful candidate will be responsible for designing, developing and managing innovative web-based applications that support, enhance, and extend the mission of The Ohio State University Libraries. With this goal in mind, the candidate will design, develop, implement, and test web applications, as a suite of products and services, for delivery via OSU Libraries public and private web sites, library catalog, and/or other web related systems that are in accord with industry best practices, the Libraries' and Ohio State's branding standards, and web accessibility guidelines. This position provides a great opportunity to design creative and usable solutions, making a significant impact on how patrons, faculty and staff experience services at the University Libraries.

Additional Information for Applicants: (Please submit this section to OHR and request this information be added to the Additional Information section provided on the jobs board)

Services We Provide

AD&S provides four service offerings to the Libraries: collaboration and communication platforms which include the Libraries' content management system, blogs and Intranet; custom application development; Integrated Library Systems support (i.e. catalog services); and IT project management.

The Team

The AD&S team currently includes two developers, one project manager/business analyst, and two team members who support the ILS (Integrated Library System). We are expanding our team to a total of five developers to diversify our skill sets, increase throughput, and support a growing Digital Initiatives program. We collaborate closely with the Infrastructure Support department in monitoring, supporting, and maintaining systems.

How We Work

AD&S practices agile software development as appropriate with emphasis on short iterations, lightweight requirements-gathering, and developer-functional expert partnerships. Our typical week includes Maintenance Monday (dedicated to ticket resolution and application maintenance), daily standups, a sprint planning meeting, and three days of project work. The developer chosen for this position is expected to form productive pairs with developers on our team and spend a good deal of time in pair programming. We value close collaboration (within the Libraries and with other groups on campus), face-to-face communication, and transparency, and we are results-driven while balancing time for fun and innovation.

What We Use

The developers work with open-source software whenever possible. The exception is our ILS which is third-party, but we will soon be able to interact with its catalog data via SQL queries and an API. Our primary languages are Java, PHP, and Ruby, and we use MySQL and PostgreSQL databases. In addition, we support a large installation of DSpace (kb.osu.edu) and a CMS on Silverstripe (library.osu.edu).

Read more about us at: library.osu.edu/blogs/it

Supervision and Essential Duties:

- May supervise student employees

Duties Description:

50% Application Development

Designs, develops, implements, and tests new web applications, as a suite of products and services, for delivery via OSU Libraries public and private web sites, library catalog, and/or other web related systems that support, enhance, and extend the strategic and operational goals of the University Libraries; serves as a member of a team of developers working in close collaboration with a significant percentage of time engaged in pair programming; champions an agile and user-centered approach to software development; adheres to professional software engineering best practices, including continuous integration, source code control, and test-driven development; closely collaborates with the project manager in planning sprints and releases, managing product backlogs, and communicating project status; explores, evaluates, and recommends new and alternative technologies and tracks industry trends; designs and maintains MySQL, PostgreSQL and other relational databases; ensures that applications meet ADA web accessibility standards

20% Application Maintenance and Support

maintains, troubleshoots, and refactors legacy web applications, services, and databases;

20% Systems Support

collaborates closely with Infrastructure Support in monitoring, supporting, and maintaining systems; maintains accurate and thorough inventories, stack diagrams, and technical documentation of applications and systems; recommends server configurations and tools that optimize applications and systems for stability, reliability, reuse, security and performance; identifies root causes of systems outages and recommends steps to prevent future systems downtime; monitors the integrity of a multi-tier development environment, including development, staging, and production environments

10% Outreach and Service

demonstrates a strong service orientation and commitment to the strategic goals of the organization; serves on Libraries' committees, working groups, and task forces; expands skills and personal network through participation in university-level technology initiatives and users groups and attendance at conferences, training programs, and workshops

Education and Experience:

Required Qualifications

Bachelor's Degree in computer & information science or engineering, or an equivalent combination of education and experience; programming experience, preferably in open-source programming languages and frameworks such as Ruby on Rails or PHP; experience working with relational databases, such as MySQL or PostgreSQL;

Desired Qualifications

Demonstrated experience working with and/or designing APIs ; experience programming in Java; experience in HTML, JavaScript-based frameworks, CSS and responsive design; familiarity with the principles and practices of user experience (UX), web accessibility, and user interface design

Please submit to OHR the below for the required supplemental questions and request no other supplemental questions be created, we want to avoid screening questions which suggest that the example languages are required:

1. *Do you have at least 1 year of programming experience?
Yes
No
2. *Do you have at least 1 year of experience working with relational databases?
Yes
No

Position Title: Java / Web Application Developer
Position Classification: Analyst/Programmer Grade 53 Code 1852
Organization: University of Rochester, River Campus Libraries
Full-time – 40 hrs. per week

Position Summary Statement:

Seeking a Java application developer for an exciting opportunity in the Libraries' Digital Initiatives Unit. This position will be responsible for various web development projects serving the evolving needs of the University community. The primary responsibility is to develop the web front-end for our institutional repository system, which is based on MIT's open-source DSpace software. This includes the development of user interfaces as well as back-end connectivity to databases and other web services. The position reports to the Web Initiatives Manager.

Responsibilities:

- Develop software using Java, JavaServer Pages (JSP), Java Servlets, JDBC, SQL, HTML and CSS
- Extend an existing open-source platform for institutional repositories (DSpace) to be used for the University archive and to be shared with institutions across the country
- Collaborate with the MIT DSpace federation and developers at other universities to share code and build working relationships
- Integrate web services including search and retrieval (SRU/W, XML), metadata harvesting (OAI), and streaming (Real/WMP)
- Integrate web applications with various commercial library products
- Participate in the design of software platform architectures and databases
- Work closely with members of the Digital Initiatives Unit including the Web Initiatives Manager, Graphic Designer, Social Scientist, and other developers to understand project requirements and carry out project planning, tracking, and implementation activities
- Produce well designed, documented, and tested code.
- Deploy and maintain the code base for completed applications

Qualifications and Experience (Required):

- A Bachelor's degree in Computer Science or similar
- Experience in Java, JSP, Servlets and other Java Technologies
- Experience with database design and programming (JDBC, SQL)
- Experience with website development (HTML, CSS)
- Evidence of development experience (screen shots, code samples)
- Experience integrating web applications with various components and web services
- Ability to work collaboratively with diverse groups in project planning and development
- Ability to handle simultaneous projects and clearly articulate how the project tasks are being prioritized
- Experience with software design methods, models, and standards.
- Excellent oral and written communication skills and above average technical aptitude

Qualifications and Experience (Preferred):

- Experience with XML and XSLT
- Familiarity with metadata standards and schemas
- Basic knowledge of Photoshop
- Experience with Apache, Tomcat, Java Mail, JAF, and PostgreSQL
- Familiarity with persistent identifiers and the Digital Object Identifier System
- Familiarity with library technologies and standards

JOB TITLE: Programmer Analyst

DEPARTMENT: University Library, University of Saskatchewan

PRIMARY PURPOSE: To provide effective management of library applications and servers to support the teaching, learning and research needs of the University of Saskatchewan (U of S) community.

NATURE OF WORK: Reporting to the Library Systems and Information Technology (LS & IT) Project Manager, the programmer/analyst works as part of a professional IT services team to provide senior-level programming, analysis and systems administration for applications and servers. The Programmer/Analyst will be responsible for the implementation of new systems as well as the enhancement, maintenance and support of existing ones.

The work requires a breadth of knowledge and skill in both application development and server management. Programmer/Analysts are regularly tasked with solving complex, challenging problems and succeed through continual learning and the application of new technologies. The Programmer/Analyst is fully responsible for the design, development and testing of solutions that will meet client needs. There may be times where the Programmer/Analyst is expected to act as a technical lead for a team of programmers and should be able to identify and assign tasks accordingly. As an experienced member of the team, the programmer/analyst will be expected to provide leadership and guidance regarding best practices in application development and server management. The incumbent is required to balance multiple and sometimes competing priorities, deadlines and expectations. The incumbent must possess effective leadership, communication and organizational skills to contribute effectively. Occasional weekend and evening work will be required.

LS&IT provides services to the University Library and the Saskatchewan Health Information Resources Partnership (SHIRP). The library operates Innovative Interfaces' integrated library system including the online catalogue, circulation, acquisitions, cataloguing, electronic resources and patron web services modules; Ex Libris resource discovery tool (Primo) and link resolver (SFX); OCLC ILL software (VDX), Drupal, Solr, Cascade Server, Content DM, D-Space, Shibboleth, OpenURL, EZ Proxy and LDAP schema; hosts and administers Windows and Linux servers.

ACCOUNTABILITIES:

- Ensures IT systems are designed and implemented to meet client needs and in accordance with library and university standards of practice
- Ensures uninterrupted and reliable access to library services and resources is available for all patrons
- Ensures the safety, security and integrity of the library's data and systems are maintained to limit exposure to undue risk
- Ensures effective troubleshooting, problem-solving and investigation, training and user support is provided
- Provides expertise and information to allow for effective IT-related planning and decisions that support the unit's goals and objectives.
- Ensures that leading practices in programming and systems administration are identified, standards of practice are defined and used, and encourages the continual improvement of LS & IT services
- Contributes to a positive team environment within the unit through effective communication and collaboration
- Builds and fosters collaborative relationships with organizations both internal and external to LS&IT

QUALIFICATIONS

Education: An undergraduate degree in Computer Science or a related discipline.

Experience: A minimum of 5 years experience as an application developer in a Linux environment. Demonstrated experience in requirements analysis and software architectural design; vendor software implementation and customization; web application development and database design; network security and authentication; application development and code management tools and directing the work of other developers. Preference will be given to candidates with previous Linux systems administration experience

in a virtual environment. Experience with mobile application and/or java web application development would be an asset.

Skills: Demonstrated ability to develop and integrate user-friendly applications within a database environment using PHP frameworks, Javascript, XML, SQL; demonstrated ability to develop web applications using a WCMS (Cascade, Drupal, or other); demonstrated ability to organize work, set priorities and meet deadlines, work independently and use initiative; demonstrated ability to provide mentorship and guidance to junior programmers; effective interpersonal and communication skills to build and maintain relationships with various campus organizations, clients and co-workers; ability to work collaboratively in a challenging environment; and effective investigative, analytical and problem-solving skills.

THE UNIVERSITY OF TENNESSEE
POSITION DESCRIPTION QUESTIONNAIRE (PDQ)

POSITION INFORMATION:

Name of Current Holder (if occupied): _____ Personnel No.: _____
IRIS Position Number: _____ Pay Grade: 40
Position Title: IT Admin II
Job Title: Programmer, Digital Initiatives
Name of Supervisor: _____ Phone: _____
Responsible Cost Center Number and Name: E01-6010 (Library)
Department Contact: _____ Email address: _____ Phone: _____

REASON FOR EVALUATION:

- New Position
- Reclassification Request (Significant Change in Duties)
- Reorganization
- Standard Review Cycle
- Vacant Position
Name of Last Incumbent: _____
- Other (Please Specify): _____

HR/PERSONNEL USE ONLY:

Analysis: KH _____ PS _____ ACC _____
Total Points: _____
Job Title: _____ Pay Grade: _____
Job Family: _____
FLSA Category: Exempt Non-Exempt
Comments:

Name of Current Holder (if occupied):
Position No.:

A. POSITION SUMMARY:

Why (or for what reason) does this position exist?

One of the University of Tennessee Libraries' high priority strategic goals is to provide comprehensive and efficient access to our users where they are. The work of the individual in this position is vital to successfully meeting this goal.

This position resides in the department of Digital Initiatives within the University of Tennessee Libraries and serves as a programmer and system administrator. Programming duties include developing new and extending existing open-source platforms and vendor provided solutions in order to help the Libraries deliver high quality digital collections and other services as needed. System administration duties include responsibility for a number of enterprise class Linux servers, both physical and virtual, and range from operating system level implementation and maintenance to programming custom authentication and access to services.

The person in this position will work with minimal supervision both independently and collaboratively as part of a team of library computer programmers. This position will complete projects as assigned to them by the Assistant Professor and Systems Development Librarian (to whom they will report). When assigned tasks, this position will be responsible for choosing the best computer programming languages, software, and hardware in order to complete projects within the required deadline and budget. The position will be expected to work with minimal supervision and to make sure that completed projects function as detailed in the initial request and meet the goals of the project overall.

The person in this position will create specifications for complex library information systems and software using accepted systems analysis techniques and procedures and in consultation with other library and university programmers, systems administrators, technical support staff, and end users. These system specifications will be utilized to design, develop, test, document, and implement new computer programs and information systems and technologies as well as to modify, enhance, and extend existing information systems and technologies already in place within the UTK Libraries.

B. MEASURES OF IMPACT:

What areas does this position impact? (Mark all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Program | <input checked="" type="checkbox"/> Campus/Institute |
| <input checked="" type="checkbox"/> Department | <input checked="" type="checkbox"/> University |
| <input checked="" type="checkbox"/> Division/College | <input checked="" type="checkbox"/> External to the University |

Describe the level of responsibility this position has in the area(s) checked above.

Department (University of Tennessee Digital Initiatives)

Will share with other members of Digital Initiatives the responsibility for identifying, investigating, integrating, and creating new and emerging technologies in support of library operations, goals, and end-user information-seeking needs. Will provide support for administering resources used by other department members such as web services, networked connections, and authentication.

Division/College (Library)

Will be responsible for ensuring the library meets the strategic goal of providing comprehensive and efficient access to our users where they are.

Campus

Will greatly improve access to virtual library information resources for campus faculty, staff, and students such that they will be able to more efficiently and effectively conduct research, teach, and complete coursework.

University

Supports the university's teaching and research mission by working to develop more effective and efficient ways for faculty, staff, and students to access virtual information resources equally across the state regardless of physical location.

External to the University

Knowledge, techniques, solutions, code, documentation, and so on developed by this position will be shared with external library, university, and information technology communities.

What type of budget impact does this position have on the area(s) for which it is responsible?

- | | |
|---|---|
| <input type="checkbox"/> Full authority to commit funds (Explain)* | Size of budget impacted |
| <input type="checkbox"/> Effective recommendations to commit funds (Explain)* | Size of budget impacted <u>\$100,000+</u> |
| <input type="checkbox"/> Maintain or audit funds committed (Explain)* | Size of budget impacted |
| <input checked="" type="checkbox"/> Little or no budget responsibility | |

***Explanation:**

Provides technical expertise in evaluating the costs of implementing, developing, and supporting emerging technologies and recommends accordingly the purchase of all necessary hardware, software, or other equipment.

The server hardware that will host all or part of the new programs, systems, and services created as a result of this position, and for which the library will have to budget for the ongoing management, maintenance, and periodic replacement of, is valued in excess of \$100,000.

**C. POSITION DUTIES:
What are the essential functions and responsibilities of this position (please indicate approximate percentage of time devoted to each function)?**

<u>Function/Responsibility</u>	<u>% of Time</u>
Programming	50%
Fulfill library-centric information technology needs by developing custom in-house computer programs, systems and services.	
Enhance the performance and usability of existing library-centric information technology by optimizing and extending computer programs, systems, and services.	
Automate tasks so work can be carried out by others.	
Customize open source and commercial computer programs, systems, and services.	

Integrate custom-developed technology into existing computer systems and services.

Implement new online delivery systems as needed.

Provide ongoing upgrades, enhancements, security patches, and bug fixes to implemented computer programs, systems, and services.

System Administration **25%**

Work closely with departmental system administrators to develop, implement, and carry out procedures for both immediate and long-term administration and support of all new information technology computer programs, systems, and services this position is responsible for creating and implementing.

At a minimum this includes:

Work as a part of a team of admins to manage digital library program servers and maintain all server software and hardware for each implementation including software upgrades.

Training other departmental system administrators on newly implemented technologies.

Work closely with departmental server administrators to continually maintain and improve the stability, availability (up time), performance, and security of implemented computer programs, systems, and services.

Work closely with departmental backup server administrators to perform disaster planning that ensures all data for implemented computer programs, systems, and services is backed up and fully recoverable in the event of catastrophic system failure.

Troubleshooting any problems that may occur and developing and implementing solutions and procedures designed to minimize the chance of their recurrence in the future.

Collaboration **25%**

Collaborate with department members, faculty librarians, and other library staff on assigned information technology development projects.

At a minimum this includes:

Attend and contribute to project-related meetings.

Commit custom development and modification of existing code into a shared revision control system.

Track progress of assigned tasks and keep clear lines of transparency and accountability by using departmental project management tools.

Ensure that assigned tasks are completed on time and within budget in order to ensure the projects and departmental needs are met successfully.

Work with others to solve project-related problems in a timely and effective manner.

Document and share procedures with other department members to ensure long-term sustainability of library systems.

Consult with supervisor and department members to identify and recommend optimal technologies, techniques, and strategies for successful project completion.

Consult with end users, other library programmers and technologists, OIT technologists, and UTK Libraries' faculty and staff concerning user needs, usability requirements, campus computer security requirements, and integration of new programs and services with existing library and university computer systems and services.

Participate with other members of the department on regular on call rotations.

Actively research and evaluate new technologies for the improvement of the digital library program and make recommendations for future information technology development projects.

Provide programming support and guidance for the digital library program and Technical Services metadata creators.

**D. DECISIONS:
What types of decisions does this position make?**

Performs daily work tasks with minimal supervision.

Determines and recommends the best computer programming languages, practices and techniques, computer hardware and software, and other technology as needed to meet the needs of specific assigned tasks and projects.

What types of decisions are referred to others?

Decisions to change project goals and priorities.

Decisions involving additional funding for projects and technology beyond what has already been approved.

How are decisions implemented?

By the application of education, knowledge, experience, and professional judgment.

**E. SUPERVISION:
What types of supervisory responsibility does this position exercise?**

- Hiring, disciplining, supervising, granting increases (Explain)*
- Effective recommendations in hiring, etc. (Explain)*
- Providing work direction to a group of employees (Explain)*
- Assisting others by providing guidance (Explain)*
- Little or no supervisory responsibility

***Explanation:**

This position will provide technical expertise in software development that will influence all aspects of any development project they are a part of including specific technologies used, software development strategies and techniques, timelines, and costs.

As the expert on the computer programs, systems, and services they will be responsible for implementing, the person in this position will provide guidance to others in the proper use of the computer programs, systems and services within the parameters of their inherent capabilities.

Number or employees/students that this position supervises:

_____ Exempt employees _____ Students
_____ Non-exempt employees _____ Others (Explain)*

***Explanation:**

This position will not serve in a direct supervisory capacity.

F. MINIMUM QUALIFICATIONS:

What are the minimum qualifications in terms of education, experience, job skills, and physical requirements of the job which would be required?

Education:

Bachelor's degree

Experience:

5-6 years computer programming experience with several years working in a networked or Web-based environment.

Mastery of at least two programming languages (For example: JavaScript, PHP, JAVA, Python, Ruby).

1-2 years experience working in an enterprise server environment.

Experience or knowledge of media streaming (For example: Quicktime streaming from an Apple Xserv server).

Experience or knowledge of electronic media formats (For example: Quicktime, MPEG-4, AAC).

Experience or knowledge of mobile device application development (For example: iPhone App development).

Experience or knowledge of SQL or other database environments.

Experience or knowledge of Web applications and services.

Demonstrated experience working with RESTful and / or SOAP based APIs.

Experience or knowledge of XML schemas or DTDs such as TEI, KML, or RDF.

Experience or knowledge of libraries, preferably academic libraries.

Job Skills:

Ability to work on unique, one-of-a-kind projects.

Excellent oral and written communication skills.

Ability to work collaboratively with others from diverse personal and professional backgrounds.

Ability to work independently or collaboratively in group settings.

Ability to quickly learn new programming languages and technologies.

Ability to think creatively and problem solve.

Highly flexible.

Physical Requirements: (Please complete attached chart)

G. ADDITIONAL INFORMATION:

Please provide any additional information you believe will assist in understanding this position:

This position will work side-by-side on a daily basis with other programmers and system administrators as they develop and implement new and emerging information technologies in a library environment. The individual in this position will routinely engage in deeply complex technical planning, problem solving, and decision making concerning computer programs, systems, and services which students and faculty teachers and researchers in our university community will depend upon.

The key to success for the individual selected for this position is the ability to quickly learn and smoothly transition to new programming languages/technologies as specific projects demand. Unlike many programmer positions that are focused on a specific core set of technologies, this position will be much more diverse and require great technical agility.

***Attach the Departmental Organizational Chart prepared by your department with names and titles (include to whom this position reports, others who report to the same individual, and who reports to this position).**

H. APPROVAL:

This Position Description Questionnaire (PDQ) has been reviewed by the individuals whose signatures appear below, indicating that the PDQ accurately reflects the job content of the position:

THE UNIVERSITY OF TENNESSEE
POSITION DESCRIPTION QUESTIONNAIRE (PDQ)

POSITION INFORMATION:

Name of Current Holder (if occupied): _____ Personnel No.: N/A
IRIS Position Number: _____ Pay Grade: _____
Position Title: _____
Job Title: IT Admin II
Name of Supervisor: _____ Phone: _____
Responsible Cost Center Number and Name: _____
Department Contact: _____ Email address: _____ Phone: _____

REASON FOR EVALUATION:

- New Position
- Reclassification Request (Significant Change in Duties)
- Reorganization
- Standard Review Cycle
- Vacant Position
Name of Last Incumbent: _____
- Other (Please Specify): _____

HR/PERSONNEL USE ONLY:

Analysis: KH _____ PS _____ ACC _____
Total Points: _____
Job Title: _____ Pay Grade: _____
Job Family: _____
FLSA Category: Exempt Non-Exempt
Comments: _____

Name of Current Holder (if occupied): _____ Position No.: _____

A. POSITION SUMMARY:
Why (or for what reason) does this position exist?

One of the University of Tennessee Libraries' high priority strategic goals is to provide comprehensive and efficient access to our users where they are. The work of the individual in this position is vital to successfully meeting this goal.

This position will be a member of the Systems department within the University of Tennessee Libraries and will help jump-start the development and implementation of new and emerging information technologies for enhanced virtual access.

The person in this position will work with minimal supervision both independently and collaboratively as part of a team of library computer programmers. This position will complete projects as assigned to them by the Assistant Professor and Systems Development Librarian (to whom they will report). When assigned tasks, this position will be responsible for choosing the best computer programming languages, software, and hardware in order to complete projects within the required deadline and budget. The position will be expected to work with minimal supervision and to make sure that completed projects function as detailed in the initial request and meet the goals of the project overall.

The person in this position will create specifications for complex library information systems and software using accepted systems analysis techniques and procedures and in consultation with other library and university programmers, systems administrators, technical support staff, and end users. These system specifications will be utilized to design, develop, test, document, and implement new computer programs and information systems and technologies as well as to modify, enhance, and extend existing information systems and technologies already in place within the UTK Libraries.

B. MEASURES OF IMPACT:
What areas does this position impact? (Mark all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Program | <input checked="" type="checkbox"/> Campus/Institute |
| <input checked="" type="checkbox"/> Department | <input checked="" type="checkbox"/> University |
| <input checked="" type="checkbox"/> Division/College | <input checked="" type="checkbox"/> External to the University |

Describe the level of responsibility this position has in the area(s) checked above.

Department (University of Tennessee Systems):

Will share with other members of Systems the responsibility for identifying, investigating, integrating, and creating new and emerging technologies in support of library operations, goals, and end-user information-seeking needs.

Division/College (Library):

Will be responsible for ensuring the library meets the strategic goal of providing comprehensive and efficient access to our users where they are.

Campus:

Will greatly improve access to virtual library information resources for campus faculty, staff, and students such that they will be able to more efficiently and effectively conduct research, teach, and complete coursework.

University:

Supports the university's teaching and research mission by working to develop more effective and efficient ways for faculty, staff, and students to access virtual information resources equally across the state regardless of physical location.

External to the University:

Knowledge, techniques, solutions, code, documentation, and so on developed by this position will be shared with external library, university, and information technology communities.

What type of budget impact does this position have on the area(s) for which it is responsible?

- | | |
|---|---|
| <input type="checkbox"/> Full authority to commit funds (Explain)* | Size of budget impacted |
| <input type="checkbox"/> Effective recommendations to commit funds (Explain)* | Size of budget impacted <u>\$100,000+</u> |
| <input type="checkbox"/> Maintain or audit funds committed (Explain)* | Size of budget impacted |
| <input checked="" type="checkbox"/> Little or no budget responsibility | |

***Explanation:**

C.

POSITION DUTIES:

What are the essential functions and responsibilities of this position (please indicate approximate percentage of time devoted to each function)?

<u>Function/Responsibility</u>	<u>% of Time</u>
Programming	50%
<ul style="list-style-type: none"> ○ Fulfill library-centric information technology needs by developing custom in-house computer programs, systems and services. ○ Enhance the performance and usability of existing library-centric information technology by optimizing and extending computer programs, systems, and services. ○ Customize open source and commercial computer programs, systems, and services. ○ Integrate custom-developed technology into existing computer systems and services. ○ Provide ongoing upgrades, enhancements, security patches, and bug fixes to implemented computer programs, systems, and services. 	

System Administration

15%

- Work closely with departmental system administrators to develop, implement, and carry out procedures for both immediate and long-term administration and support of all new information technology computer programs, systems, and services this position is responsible for creating and implementing.

At a minimum this includes:

- Work as the primary system administrator for Mac OS X servers and maintain all server software and hardware for each implementation including software upgrades.
- Training other departmental system administrators on newly implemented technologies.
- Working closely with departmental server administrators to continually maintain and improve the stability, availability (up time), performance, and security of implemented computer programs, systems, and services.
- Working closely with departmental backup server administrators to perform disaster planning that ensures all data for implemented computer programs, systems, and services is backed up and fully recoverable in the event of catastrophic system failure.
- Troubleshooting any problems that may occur and developing and implementing solutions and procedures designed to minimize the chance of their recurrence in the future.

Collaboration

35%

- Collaborate with department members, faculty librarians, and other library staff on assigned information technology development projects.

At a minimum this includes:

- Attend and contribute to project-related meetings.
- Ensure that assigned tasks are completed on time and within budget in order to ensure the projects and departmental needs are met successfully.
- Work with others to solve project-related problems in a timely and effective manner.
- Document and share procedures with other department members to ensure long-term sustainability of library systems.
- Consult with supervisor and department members to identify and recommend optimal technologies, techniques, and strategies for successful project completion.
- Consult with end users, other library programmers and technologists, OIT technologists, and UTK Libraries' faculty and staff concerning user needs, usability requirements, campus computer security requirements, and integration of new programs and services with existing library and university computer systems and services.

- Participate with other members of the department on regular on call rotations.

Make recommendations for future information technology development projects.

**D. DECISIONS:
What types of decisions does this position make?**

Performs daily work tasks with minimal supervision.

Determines and recommends the best computer programming languages, practices and techniques, computer hardware and software, and other technology as needed to meet the needs of specific assigned tasks and projects.

What types of decisions are referred to others?

Decisions to change project goals and priorities.

Decisions involving additional funding for projects and technology beyond what has already been approved.

How are decisions implemented?

By the application of education, knowledge, experience, and professional judgment.

**E. SUPERVISION:
What types of supervisory responsibility does this position exercise?**

- Hiring, disciplining, supervising, granting increases (Explain)*
- Effective recommendations in hiring, etc. (Explain)*
- Providing work direction to a group of employees (Explain)*
- Assisting others by providing guidance (Explain)*
- Little or no supervisory responsibility

***Explanation:**

This position will provide technical expertise in software development that will influence all aspects of any development project they are a part of including specific technologies used, software development strategies and techniques, timelines, and costs.

As the expert on the computer programs, systems, and services they will be responsible for implementing, the person in this position will provide guidance to others in the proper use of the computer programs, systems and services within the parameters of their inherent capabilities.

Number or employees/students that this position supervises:

_____ Exempt employees _____ Students
_____ Non-exempt employees _____ Others (Explain)*

***Explanation:**

This position will not serve in a direct supervisory capacity.

F. MINIMUM QUALIFICATIONS:

What are the minimum qualifications in terms of education, experience, job skills, and physical requirements of the job which would be required?

Education:

Bachelor's degree in Computer Science or closely related field.

Experience:

5-6 years computer programming experience with several years working in a networked or Web-based environment.

Mastery of at least two programming languages (For example: PHP, JAVA, Python, Objective-C).

1-2 years experience working in an enterprise server environment.

Experience or knowledge of media streaming (For example: Quicktime streaming from an Apple Xserv server).

Experience or knowledge of electronic media formats (For example: Quicktime, MPEG-4, AAC).

Experience or knowledge of mobile device application development (For example: iPhone App development).

Experience or knowledge of SQL or other database environments.

Experience or knowledge of Web applications and services.

Job Skills:

Ability to work on unique, one-of-a-kind projects.

Excellent oral and written communication skills.

Ability to work collaboratively with others from diverse personal and professional backgrounds.

Ability to work independently or collaboratively in group settings.

Ability to quickly learn new programming languages and technologies.

Ability to think creatively and problem solve.

Highly flexible.

Physical Requirements: (Please complete attached chart)

G. ADDITIONAL INFORMATION:

Please provide any additional information you believe will assist in understanding this position:

This position will work side-by-side on a daily basis with other programmers and system administrators as they develop and implement new and emerging information technologies in a library environment. The individual in this position will routinely engage in deeply complex technical planning, problem solving, and decision making concerning computer programs, systems, and services which students and faculty teachers and researchers in our university community will depend upon.

The key to success for the individual selected for this position is the ability to quickly learn and smoothly transition to new programming languages/technologies as specific projects demand. Unlike many programmer positions that are focused on a specific core set of technologies, this position will be much more diverse and require great technical agility.

***Attach the Departmental Organizational Chart prepared by your department with names and titles (include to whom this position reports, others who report to the same individual, and who reports to this position).**

H. APPROVAL:

This Position Description Questionnaire (PDQ) has been reviewed by the individuals whose signatures appear below, indicating that the PDQ accurately reflects the job content of the position:

_____	_____	_____	_____
Employee Signature	Date	Supervisor's Signature	Date
_____	_____		
Dean, Director, or Dept Head	Date		

THE UNIVERSITY OF TENNESSEE, KNOXVILLE LIBRARIES

FACULTY POSITION DESCRIPTION

POSITION TITLE: Systems Development Librarian

DEPARTMENT: Digital Initiatives

NAME: [REDACTED]

1. GENERAL FUNCTION

The Systems Development Librarian reports to the Head of Digital Initiatives. This position supervises three exempt level staff members and works in conjunction with them to deliver high-quality digital collections and answer programming needs in UT Libraries' digital library program.

This position also has specific responsibilities in the area of discovery and works with members of Discovery and Technical Services to support, develop, and advance the libraries' discovery platform.

Finally, this position works collaboratively with members of Digital Initiatives and other library departments in the area of emerging technologies to explore, develop, test, and implement ideas for new systems and services using emerging technologies in support of teaching, learning, and the Libraries' strategic goals. These duties include working with faculty and staff throughout the library to implement open source and proprietary web applications and administering the Database of the Smokies.

The position works closely with computer hardware / software vendors, campus computing (OIT), and other external technology groups as appropriate.

2. SPECIFIC DUTIES

Provide technical leadership for digital collections, programming, web-applications, and other online library services and initiatives including the Libraries' discovery interface. Anticipate and track changes in each of these areas and implement system changes and updates as appropriate.

Anticipate and track technology trends. Investigate and test new information technologies and share with colleagues throughout the library. Collaborate with library colleagues to identify ways new technologies, or old technologies used in new ways, can solve problems, meet needs, and create new services. Develop and implement new systems and services based on new technologies as appropriate.

Participate in the management of the Digital Initiatives including supervision of 3

exempt staff with responsibility for delivering digital collections, systems administration, and programming.

Creative scholarly work including research, publication, and presentations.

Participate in committees, working groups, and task forces, especially at the national level.

FISCAL RESPONSIBILITY

Recommend the purchase of library technology within a prescribed budget and participate in the writing of bid specs for complex, multi-vendor systems as appropriate.

TEACHING

Supervise SIS Practicum students.

QUALIFICATIONS

Required:

ALA-accredited master's degree in library or information science. Relevant professional-level technology experience (academic library preferred). Understanding of network standards and protocols. Supervisory experience. Knowledge of developments and trends in information systems, particularly emerging technologies in libraries and higher education. Understanding of Blackboard or similar course management systems. Extensive knowledge of core Web technologies and programming environments including HTML, CSS, and Javascript. Experience with XML, XSLT, and other digital library technologies. Understanding of video streaming technologies. Familiarity with one or more scripting languages such as PHP, Python, Perl, or Ruby. Knowledge of best practices for Web design and usability. Willingness to learn Drupal and work with it on a daily basis. Evidence of excellent written and oral communication skills and ability to work collegially. Demonstrated experience managing complex technical projects. Strong commitment to making technology work for people.

Preferred:

Project management experience. Demonstrated experience with web analytics platforms such as Google Analytics, KISSmetrics, Open Web Analytics, or Piwik. Experience with content management systems and frameworks such as WordPress, Django, Rails, or Drupal.

**University of Virginia
Position**

Employee Details

Employee Last Name: Richeson
Employee First Name: Susan
Employee Number: 206373
Employee Type:

Title Details

Generic: Yes
Uva Job Title: Software Engineer IV-1ITSWEN4K
Uva Job Title Code: 1ITSWEN4K

**College and University Personnel
Association (CUPA)**

Select the CUPA Survey job code that best reflects the primary purpose of the Uva job. CM - [5501] Programmer Analyst

**Western Management Group's
EduComp (WE)**

Select the EduComp Survey job code that best reflects the primary purpose of the Uva job. WE - 18817 APPLICATIONS PROGRAMMER/ANALYST 2

Watson Wyatt (WW)

Select the WW Survey job code that best reflects the primary purpose of the Uva job. WW - 1950 General Programmer/Analyst

WW Level Indicator: 3

Select the level.

Additional Surveys

Select additional Survey job code that best reflects the primary purpose of the Uva job.

Market Matches and Range Builder
Notes

Market Range - Lower Reference: \$58,116

Market Range - Upper Reference: \$107,515

FLSA Exemption Status: Exempt

Type of Application: Staff Application

EEO Category: Technicians

EEO-6 Code: 5

EEO-6 Sub Code: J

IPEDS Category:

Produce and maintain department applications to accomplish business needs. Perform engineering and development work on moderate- to large-scale or complex projects. Perform advanced software analysis, design, and implementation.

Incumbent will address complex problems and will use experience and judgment in creating solutions. Incumbent seeks assistance when significant deviations are proposed, or when unprecedented problems arise. Incumbent develops approaches to problem-solving and anticipates/mitigates potential issues. Incumbent must be able to quickly modify behavior to align with change; work effectively in ambiguous situations; collaborate internally and externally to create solutions to long-standing problems; consider a variety of quantitative and qualitative factors in decision-making; question current state and make suggestions for improvements; design processes and procedures to ensure quality; and analyze and determine relationships among complex problems and issues.

Position Summary:

Impact is felt within the team/department for which the incumbent works and within multiple, coordinating departments. Work quality, decision-making and long-term project management can affect the productivity of students, faculty and/or staff. Impact of errors is substantial and usually university-wide though mostly short-lived.

Interactions are with fellow team members and coordinating team members, but the incumbent will also have interactions with assigned student, faculty, or staff clients. Incumbent works with and may manage external vendors and service providers. Incumbent should possess superior verbal and written communication skills to convey technical guidance and information to users and to provide excellent customer service. Incumbent will train and provide guidance to more junior staff members and provide management with input into performance evaluations. Incumbent may provide guidance to management on critical technology issues. Incumbent is recognized as a technical authority within the University. Incumbent must be able to take actions that respect diversity; follow decisions through to implementation; and act in alignment with University's values.

Emergency Assistance:

May be required to perform other duties as assigned. May be required to assist the agency or state government generally in the event of an emergency declaration by the Governor.

Produce and maintain department applications to

Posting Summary: accomplish business needs. Perform engineering and development work on moderate- to large-scale or complex projects. Perform advanced software analysis, design, and implementation.

Employment Conditions:

EO/AA Statement for Your Organization:

You may use this mandatory UVA EO/AA statement. EOP encourages you to develop a broader EO/AA statement for your School/Department. Your statement must be approved by EOP in advance.

The University of Virginia is an affirmative action/equal opportunity employer committed to diversity, equity, and inclusiveness.

Pass message:

Thank you for your interest in this position. Our screening and selection process is currently underway and will continue until a successful candidate is chosen. Should our review of your qualifications result in a decision to pursue your candidacy, we will contact you in the near future.

Fail message:

Thank you for your interest in this position. Your response to the application questions suggests that you do not meet the minimum qualifications for this position. We are pleased with your interest and encourage you to visit our job posting site on a regular basis. We wish you success in your future career.

For Thomas Jefferson, learning was an integral part of life. The "academical village" was created around the assumption that learning is a lifelong and shared process, and that interaction between scholars and students enlivens the pursuit of knowledge.

University Leadership Characteristics:

University Human Resources strives to identify applicants who will contribute as high potential employees, leaders and managers. We employ individuals who foster and promote the University mission and purpose. Successful candidates exemplify uncommon integrity; they are honest, trusted, team-oriented and live the core values of the University. These candidates display great judgment, by practicing evidence-based decision-making. They are strategically focused by contributing to and achieving department goals and vision. They set high performance standards and hold themselves accountable by aggressively executing these standards. These employees also develop a deep passion for the University and the impact it has on students, faculty, alumni and community. Successful candidates identify their personal career goals and development opportunities, and as supervisors, help their staff do the same. They contribute to team success by leading talent, through their individual efforts and by leading and developing their teams.

General Position Information

Organization 31080 LB-Info Technology
School/Unit University Library

Are there formal guidelines, government regulations, policies that must be followed by the position (Exclude UVa & Commonwealth Human Resource Policies that cover all employees)?

No

Primary senior developer/engineer for open source software that is used by institutions across the U.S. and beyond. Stems expertise, skills in Ruby on Rails and other emerging technologies that enable UVa Library to not only maintain its role with peers but to become a respected leader in leading edge software development.

The senior software engineer will address complex problems and will use experience and judgment in creating solutions. She/he seeks assistance when significant deviations are proposed, or when unprecedented problems arise. She/he develops approaches to problemsolving and anticipates/mitigates potential issues. She/he must be able to quickly modify behavior to align with change; work effectively in ambiguous situations; collaborate internally and externally to create solutions to long-standing problems; consider a variety of quantitative and qualitative factors in decision-making; question current state and make suggestions for improvements; design processes and procedures to ensure quality; and analyze and determine relationships among complex problems and issues.

What is the primary purpose of this position?

Impact is felt within the team/department for which the senior software engineer works and within multiple, coordinating departments. Work quality, decision-making and long-term project management can affect the productivity of students, faculty and/or staff. Impact of errors is substantial and usually university-wide though mostly short-lived.

Interactions are with fellow team members and coordinating team members, but the senior software engineer will also have interactions with assigned student, faculty, or staff clients. She/he works with and may manage external vendors and service providers. She/he should possess superior verbal and written communication skills to convey technical guidance and information to users and to provide excellent customer service. She/he will train and provide guidance to more junior staff members and provide management with input into performance evaluations. She/he may provide guidance to management on critical technology issues. She/he is recognized as a technical authority within the University. She/he must be able to take actions that respect diversity; follow decisions through to implementation; and act in alignment with University's values.

Cite specific examples of decisions made with supervisory guidance AND specific examples of decisions made without supervisory guidance.

Performs long-term and non-routine assignments with only general supervisory intervention.

Working Title: SENIOR SOFTWARE ENGINEER

Agency Code: 207 UVA

Integrated System (Oracle)
Purchasing Responsibility Assigned? No

Conflict of Interest Statement
Required: No

POSITION IDENTIFICATION

US Position Number: 00403

Position Number: C3832

Position Type: University Managerial and Professional Staff

Job Group: 5J

Job Group Name: TECHNICAL/PARAPROFESSIONAL - COMPUTER RELATED

Underutilization Class- Female: Yes

Female Availability Rate (%): 38.71

Underutilization Class - Minority: No

Minority Availability Rate (%)

POSITION SUPERVISION

Name: Lubinsky, Raymond

Position Number: C5407

Employee Number: 131218

Role Title: Lead Technologist

Employee User

Recruiter Name:

Responsibilities and Duties/Position Information

Percent of Duty Total: 100

2 Records

Responsibility Statement	All Duties supporting the statement	Percentage of Time	Level of Importance
Provide Advanced Software	Demonstrate advanced software development techniques in the production of software for various projects and services, assigned or self determined. May mentor or lead others in software development strategies and deployment. Gather or refine requirements (user, development, security, etc) where necessary, acting as a technical lead in support of project efforts as assigned. Define project deliverables based on project requirements. Determine and communicate estimated time lines, assumptions and constraints. Develop, document and support	95	High

Development	software development projects as assigned or self determined. Participate in the development and/or selection and adoption of methodology and tools to manage and deploy software developed. Software development support for tools and utilities to enhance the delivery of Library materials and scholarly work to the students, staff and patrons. (E)		
Professional Development	Stay abreast of trends and developments that pertain to Software Development, data management and application development tools. Attend relevant courses and conferences. Update and maintain personal development plan, and learning plans. (on-going). Execute and implement personal development and learning plans in a timely fashion. (on-going) (A)	5	Average

Qualifications (for Staff Positions)

Preferred knowledge, skills and abilities for an individual performing this position:

Special Licenses, Registration, or Certification:

Education or Training (cite major area or study):

Level and Type of Experience:

Required and Preferred Qualifications

Required Education

What is the minimum level of formal education **required** to successfully perform the duties and responsibilities of the position? Choose one.
Degree Requirements Analysis

Bachelor's Degree or Equivalent

If degree or equivalent experience **required**, please specify:
(Entries to the right will appear in the posting for this position.)
Degree Requirements Analysis

Bachelor's degree or equivalent experience in Computer Science, MIS, Computer Engineering or related disciplines.

Required Experience Considerable - 4 to 7 years

If any experience is **required**, please specify kind of experience: Demonstrated project management skills. Experience developing large or complex software systems.

Required License or Certification: No

If yes, what is the **required** License or Certification.

Is Health Care License Required?: No

Advanced knowledge about the requirements and best practices for developing large or complex software systems.
Expert knowledge of established programming procedures and programming language; computer flow-charts and of programming logic and codes; current technological developments/trends in area of expertise; and customer

Required Knowledge, Skills and Abilities:

service standards and procedures. Must be able to create specifications, generate acceptance test requirements, and partition large projects into individual components. Ability to identify computer problems and coordinate hardware and/or software solutions; implement and troubleshoot programming changes and modifications; write complex technical instructions in the use of programs and/or program modifications; communicate with and interpret the operational requirements of end-users; investigate and analyze information and draw conclusions; and process computer data and format and generate reports; and analyze complex business requirements and technical requests.

Required Computer Applications:

Preferred Education

What level of education is **preferred** to successfully perform the duties and responsibilities of the position? Choose one.

If degree or equivalent experience **preferred**, please specify: (Entries to the right will appear in the posting for this position.)

Preferred Experience

Preferred Experience

If any experience is **preferred**, please specify kind of experience:

Preferred License or Certification:

If yes, what is the **preferred** License or Certification.

Preferred Knowledge, Skills and Abilities:

Preferred Computer Applications:

Level of Independent Activity (for Staff Positions)

In terms of overall job responsibilities, to what degree does an incumbent determine own work priorities? Choose one.

If yes, please explain, include what policies, formal guidelines or government regulations are involved:

To what degree does this position require decision-making or problem solving skills, as a primary function of the position? (This normally involves analyzing and synthesizing complex

information or recommendations from several sources). Choose one.

Does this position have budgetary responsibilities (Normally, would not include single function duties such as data entry or data collection)? **No**

If yes, please describe the extent of these responsibilities to include number and dollar value of accounts and/or grants. For grants positions, designate pre and/or post award.

Contacts of Position (for Staff Positions)

3 Records

Offices or Organizations	Purpose of Contact	Level of Contact	Frequency of Contact
UVA faculty, students, staff	Communication regarding project support	Inside UVA	Weekly
Colleagues at similar institutions or in related industry	Communication regarding tools, techniques, or applications	Outside UVA	As Needed
Software Engineer team within Library	Serves as a resource to other software engineers on complex problems. Will often train lower level software engineers on work processes and policies and assist management with developing their technical skills.	Inside UVA	As Needed

Reporting Relationships (for Staff Positions)

No Records Found

Working Conditions and Physical Requirements (for Staff Positions)

Environment

Check the appropriate box(es) that best describes the environment in which the primary function of the position is performed. **Office Environment**

If you have indicated "Other Environment", if work tasks involve one or more of the above, or if further explanation is necessary, please use the space provided:

Working Conditions & Exposures

Please describe, in more detail, any of the conditions answered with "Yes"

Physical Requirements

Describe any of the conditions selected above that are in excess of 26% time **Sitting at a desk, working at a computer.**

University of Virginia
Position

Employee Details

Employee Last Name: Durbin
Employee First Name: Michael
Employee Number: 201315
Employee Type:

Title Details

Generic Yes
UVa Job Title: Systems Engineer V-1ITSYEN5K
UVa Job Title Code: 1ITSYEN5K

**College and University Personnel
Association (CUPA)**

Select the CUPA Survey job code that best reflects the primary purpose of the UVa job. CM - [5505] Systems Programmer, Senior

**Western Management Group's
EduComp (WE)**

Select the EduComp Survey job code that best reflects the primary purpose of the UVa job. No Response

Watson Wyatt (WW)

Select the WW Survey job code that best reflects the primary purpose of the UVa job. No Response

WW Level Indicator
Select the level. No Response

Additional Surveys

Select additional Survey job code that best reflects the primary purpose of the UVa job.

**Market Matches and Range Builder
Notes**

Market Range - Lower Reference: \$70,203

Market Range - Upper Reference: \$140,405

FLSA Exemption Status: Exempt

Type of Application: Staff Application

EEO Category: Technicians

EEO-6 Code: 5

EEO-6 Sub Code: J

IPEDS Category:

Function as a senior engineer/architect; assess technology trends, issues and define technical solutions to meet University technology needs. Ensure the stability, integrity, and efficient operation of the in-house information systems that support core university functions. This is achieved by developing, monitoring, maintaining, supporting, and optimizing software and associated hardware and operating systems. Provide functional and empirical analysis related to the design, development, and implementation of systems, including hardware utility software, development software, and diagnostic software. Provide system integration and security plans and implementation.

Incumbent will address complex problems and will use experience and judgment in creating solutions. Incumbent seeks assistance when significant deviations are proposed, or when unprecedented problems arise. Incumbent develops approaches to problem-solving and anticipates/mitigates potential issues.

Position Summary:

Impact is felt within the team/department for which the incumbent works and within multiple, coordinating departments. Work quality, decision-making and long-term project management can affect the productivity of students, faculty and/or staff. Impact of errors is substantial and usually university-wide though mostly short-lived.

Interactions are with fellow team members and coordinating team members, but the incumbent will also have interactions with assigned student, faculty, or staff clients. Incumbent works with and may manage external vendors and service providers. Incumbent should possess superior verbal and written communication skills to convey technical guidance and information to users and to provide excellent customer service. Incumbent will train and provide guidance to more junior staff members and provide management with input into performance evaluations. Incumbent may provide guidance to management on critical technology issues. Incumbent is recognized as a technical authority within the University.

Emergency Assistance:

May be required to perform other duties as assigned. May be required to assist the agency or state government generally in the event of an emergency declaration by the Governor.

Function as a senior engineer/architect; assess technology trends, issues and define technical solutions to meet University technology needs. Ensure the stability, integrity, and efficient operation of the in-house information systems that support core university functions. This is achieved by developing, monitoring, maintaining, supporting, and

optimizing software and associated hardware and operating systems. Provide functional and empirical analysis related to the design, development, and implementation of systems, including hardware utility software, development software, and diagnostic software. Provide system integration and security plans and implementation.

Incumbent will address complex problems and will use experience and judgment in creating solutions. Incumbent seeks assistance when significant deviations are proposed, or when unprecedented problems arise. Incumbent develops approaches to problem-solving and anticipates/mitigates potential issues.

Posting Summary:

Impact is felt within the team/department for which the incumbent works and within multiple, coordinating departments. Work quality, decision-making and long-term project management can affect the productivity of students, faculty and/or staff. Impact of errors is substantial and usually university-wide though mostly short-lived.

Interactions are with fellow team members and coordinating team members, but the incumbent will also have interactions with assigned student, faculty, or staff clients. Incumbent works with and may manage external vendors and service providers. Incumbent should possess superior verbal and written communication skills to convey technical guidance and information to users and to provide excellent customer service. Incumbent will train and provide guidance to more junior staff members and provide management with input into performance evaluations. Incumbent may provide guidance to management on critical technology issues. Incumbent is recognized as a technical authority within the University.

Employment Conditions:

EO/AA Statement for Your Organization:

You may use this mandatory UVA EO/AA statement. EOP encourages you to develop a broader EO/AA statement for your School/Department. Your statement must be approved by EOP in advance.

The University of Virginia is an affirmative action/equal opportunity employer committed to diversity, equity, and inclusiveness.

Pass message:

Thank you for your interest in this position. Our screening and selection process is currently underway and will continue until a successful candidate is chosen. Should our review of your qualifications result in a decision to pursue your candidacy, we will contact you in the near future.

Fail message:

Thank you for your interest in this position. Your response to the application questions suggests that you do not meet the minimum qualifications for this position. We are pleased with your interest and encourage you to visit our job posting site on a regular basis. We wish you success in your future career.

For Thomas Jefferson, learning was an integral part of life. The "academical village" was created around the assumption that learning is a lifelong and shared process, and that interaction between scholars and students enlivens the pursuit of knowledge.

University Leadership Characteristics: University Human Resources strives to identify applicants who will contribute as high potential employees, leaders and managers. We employ individuals who foster and promote the University mission and purpose. Successful candidates exemplify uncommon integrity; they are honest, trusted, team-oriented and live the core values of the University. These candidates display great judgment, by practicing evidence-based decision-making. They are strategically focused by contributing to and achieving department goals and vision. They set high performance standards and hold themselves accountable by aggressively executing these standards. These employees also develop a deep passion for the University and the impact it has on students, faculty, alumni and community. Successful candidates identify their personal career goals and development opportunities, and as supervisors, help their staff do the same. They contribute to team success by leading talent, through their individual efforts and by leading and developing their teams.

General Position Information

Organization 31080 LB-Info Technology

School/Unit University Library

Are there formal guidelines, government regulations, policies that must be followed by the position (Exclude UVa & Commonwealth Human Resource Policies that cover all employees)? No

What is the primary purpose of this position? Function as a senior engineer/architect; assess technology trends, issues and define technical solutions to meet University technology needs. Ensure the stability, integrity, and efficient operation of the in-house information systems that support core university functions. This is achieved by developing, monitoring, maintaining, supporting, and optimizing software and associated hardware and operating systems. Provide functional and empirical analysis related to the design, development, and implementation of systems, including hardware utility software, development software, and diagnostic software. Provide system integration and security plans and implementation.

Incumbent will address complex problems and will use experience and judgment in creating solutions. Incumbent seeks assistance when significant deviations are proposed, or when unprecedented problems arise. Incumbent develops approaches to problem-solving and anticipates/mitigates potential issues.

The employee and supervisor agree on strategic direction,

Cite specific examples of decisions made with supervisory guidance AND specific examples of decisions made without supervisory guidance.

technologies, projects, project plans, and priorities. The supervisor is involved in decisions that impact projects, services, resources and timeframes. This position would research, analyze and propose a design, then with supervisory guidance develop a plan for prioritization and implementation. This position might decide without supervisory guidance how to conduct research, best approach to developing prototypes, or the best approach to solving a performance issue.

Working Title: Sr Software & Systems Engineer

Agency Code: 207 UVA

Integrated System (Oracle) Purchasing Responsibility Assigned? No

Conflict of Interest Statement Required: No

POSITION IDENTIFICATION

US Position Number: 08884

Position Number: C5702

Position Type: University Managerial and Professional Staff

Job Group: 5J

Job Group Name: TECHNICAL/PARAPROFESSIONAL - COMPUTER RELATED

Underutilization Class- Female: Yes

Female Availability Rate (%): 38.71

Underutilization Class - Minority: No

Minority Availability Rate (%):

POSITION SUPERVISION

Name: Lubinsky, Raymond

Position Number: C5407

Employee Number: 131218

Role Title: Director, Online Library Environment

Employee User:

Recruiter Name:

Responsibilities and Duties/Position Information

Percent of Duty Total: 1.00

4 Records

Responsibility Statement	All Duties supporting the statement	Percentage of Time	Level of Importance
Software and System Design and Development	1. Act as lead developer, working both independently and as part of larger teams to manage medium to large complexity development projects from start to finish. (E)	75	High
	2. Responsible for research, planning, analysis, and design, as well as the engineering and development work needed to implement applications and systems in support of UVa Library's business needs. (E)		
	3. Develop test plans and implement them for systems and software developed. (E)		
	4. Provide research in the area of primary responsibility. (E)		
	5. Participates in the system architecture efforts by (a) adhering to institution and departmental enterprise architecture (b) review and evaluation of existing systems (c) making recommendations for any needed changes (d) assisting in the implementation of necessary changes. (E)		
	6. Routinely coordinate and/or participate in multiple projects, managing time effectively. (E)		
Service Monitoring, Diagnosis and Repair	1. Monitor performance and functioning of UVa Library services and systems for which the employee has primary or secondary responsibility. (E)	15	High
	2. Provide accurate diagnosis and solutions for routine problems and with the help of other staff diagnose and fix more complex problems. (E)		
	3. Participate in on-call rotation which provides 24x7 coverage of all UVa Library systems and services. (E)		
	4. Provide assistance to the on-call staff with response and repair. (E)		
	5. Respond to routine requests for information within one working day. (E)		
	6. Respond to urgent or emergency requests within 2 hours. (E)		
	7. Correct interruptions to critical services within 24 hours. (E)		
	8. Notify all affected users and staff as soon as is possible during and after any service interruption (and at least 48 hours before any planned service interruption.) (E)		
Consulting & Technical Support	1. Provide technical assistance and information to staff, collaborative partners and users in a courteous and timely manner. (E)	5	Average
	2. Respond to requests for information from internal or external customers or partners within one working day. (E)		
	3. Provide accurate and timely consultation with representatives of vendor companies to facilitate problem resolution. (E)		
	4. Act as a mentor for staff and collaborating partners. (A)		

Professional Development	<p>5. Train appropriate staff as needed. (E)</p> <p>1. Complete suggested training within specified time and bring knowledge acquired back to share with others in the group or use in daily activities. (E)</p> <p>2. Take responsibility for seeking out training opportunities with others. (E)</p>	5	Average
---------------------------------	--	---	---------

Qualifications (for Staff Positions)

Preferred knowledge, skills and abilities for an individual performing this position:

Special Licenses, Registration, or Certification:

Education or Training (cite major area or study):

Level and Type of Experience:

Required and Preferred Qualifications

Required Education

What is the minimum level of formal education **required** to successfully perform the duties and responsibilities of the position? Choose one.

Bachelor's Degree or Equivalent

[Degree Requirements Analysis](#)

If degree or equivalent experience **required**, please specify: (Entries to the right will appear in the posting for this position.)

Bachelor's degree or equivalent experience in Computer Science, MIS, Computer Engineering or related discipline.

[Degree Requirements Analysis](#)

Required Experience

Extensive - 7 years plus

If any experience is **required**, please specify kind of experience:

Minimum 7 years of experience in design, development deployment and maintenance of Enterprise class software and systems.

Required License or Certification:

No

If yes, what is the **required** License or Certification.

Is Health Care License Required?:

No

Required Knowledge, Skills and Abilities:

- *Working knowledge of several programming languages.
- *Working knowledge of software design methodologies including object oriented design.
- *Experience in design and development of enterprise class applications.
- *Ability to develop solutions with version control, logging, monitoring, testing and deployment mechanisms.
- *Ability to perform enterprise scale application performance tuning.
- *Knowledge of UNIX operating systems, including Linux.
- *Experience developing enterprise class software in Java.

Required Computer Applications:

Preferred Education

What level of education is **preferred** to successfully perform the duties and responsibilities of the position? Choose one.

Master's Degree

If degree or equivalent experience **preferred**, please specify: (Entries to the right will appear in the posting for this position.)

Master's degree in Computer Science, MIS, Computer Engineering or related discipline.

Preferred Experience

No Response

Preferred Experience

If any experience is **preferred**, please specify kind of experience:

Preferred License or Certification:

If yes, what is the **preferred** License or Certification.

*Working knowledge of encryption methods.
*Working knowledge of designing and developing systems to leverage external authentication methods.
*Working knowledge of MySQL design and implementation.

Preferred Knowledge, Skills and Abilities:

*Working knowledge of Rails systems design methodology.
*Working knowledge of the Ruby programming language.
*Working knowledge of metadata standards.
*Working knowledge of digital repositories such as Fedora.

Preferred Computer Applications:

Level of Independent Activity (for Staff Positions)

In terms of overall job responsibilities, to what degree does an incumbent determine own work priorities? Choose one.

Determines priorities more than 50% of time

If yes, please explain, include what policies, formal guidelines or government regulations are involved:

To what degree does this position require decision-making or problem solving skills, as a primary function of the position? (This normally involves analyzing and synthesizing complex information or recommendations from several sources). Choose one.

Overriding job requirement

Does this position have budgetary responsibilities (Normally, would not include single function duties such as data entry or data collection)?

No

If yes, please describe the extent of these responsibilities to include number and dollar value of accounts and/or grants. For grants positions,

designate pre and/or post award.

Contacts of Position (for Staff Positions)

5 Records

Offices or Organizations	Purpose of Contact	Level of Contact	Frequency of Contact
UVa Faculty	Provide technical advice, answer questions.	Inside UVA	As Needed
UVa Staff	Provide technical advice, answer questions.	Inside UVA	Daily
Open Source Communities	Exchange of information, ideas and collaborative development.	Outside UVA	As Needed
Vendors and Consultants	Product evaluation, problem reporting and tracking.	Outside UVA	As Needed
Other Institutions	Exchange of information, ideas and collaboration.	Outside UVA	As Needed

Reporting Relationships (for Staff Positions)

No Records Found

Working Conditions and Physical Requirements (for Staff Positions)

Environment

Check the appropriate box(es) that best describes the environment in which the primary function of the position is performed.

Office Environment

If you have indicated "Other Environment", if work tasks involve one or more of the above, or if further explanation is necessary, please use the space provided:

Working Conditions & Exposures

Please describe, in more detail, any of the conditions answered with "Yes"

Physical Requirements

Describe any of the conditions selected above that are in excess of 26% time

This position requires sitting at a desk for long periods (sitting for sustained periods of time) and typing on a keyboard (repetitive motion, use both hands, and fine finger manipulation).

Committee Comments

Comments:

Date

Signature of Employee