Software Engineer Architect

Job Code: 340048	FLSA Status: Exempt	Mgt. Approval: B. Larkworthy	Date: May 2023
Department: Information Services		HR Approval: M. Grayson	Date: May 2023

JOB SUMMARY

The Software Engineer Architect exhibits an exceptional level of expertise, utilizing extensive knowledge in software and integration design, coupled with profound technical leadership skills. Their primary focus is to constantly push the boundaries of software and integration engineering processes, providing the organization with advanced clinical and business capabilities.

The Software Engineer Architect assumes crucial oversight for the overall architecture and technical design of software systems, as well as the organizational integration strategy. This includes comprehensive management of application programming interfaces (APIs) for both production and consumption. Leveraging their expertise in software design, DevOps, engineering processes, and various integration technologies, the Software Engineer Architect crafts solutions that expand the organization's ability to develop interoperable software.

Working closely with cross-functional roles, including front-line clinical staff, information systems teams, and other business stakeholders, the Software Engineer Architect collaborates to construct robust software systems that yield improved clinical and business outcomes. They consistently adopt a UW Health enterprise perspective, ensuring their work aligns with the organization's mission and vision, and enables the delivery of highly valuable software solutions.

As a forward-thinking technical leader, the Software Engineer Architect is dedicated to advancing the software and integration engineering maturity of UW Health. They define and demonstrate how software and integration engineering supports the organization's overall mission and vision. Collaborating with other leaders, the Software Engineer Architect actively contributes to setting strategic and technical priorities for UW Health, while establishing a sound software and integration architecture and technology roadmap for UW Health.

MAJOR RESPONSIBILITIES

- Drive the advancement of software and integration engineering maturity of UW Health by defining and spearheading strategic initiatives.
- Establish engineering standards and design the technical framework for the organization's integration architecture.
- Lead and guide other engineering leaders in executing initiatives that propel architectural advancements.
- Reviews and occasionally write production-level code, demonstrating expertise in software engineering principles, methodologies, and best practices, including version control, code reviews, software design, software security, and software testing.
- Design, articulate, and regularly update the guiding principles that shape the organization's software and integration technical standards.
- Endorse technical standards and ensure their alignment with the overall technical vision, architecture, and roadmap.
- Design and implement organizational-level quality control measures such as comprehensive code reviews, automated and manual testing, and effective debugging procedures.
- Collaborate with other architects, principals, and leadership to communicate, coordinate, and strategize the overall software and integration engineering architecture, roadmap, and initiatives across the organization.
- Champion best practices and continuous improvement in open API-based architecture and interoperability.
- Serve as an institutional-level role model, representing the organization in the domains of software engineering, integration engineering, and DevOps. Mentor and develop engineers, actively sharing knowledge, conducting technical training sessions, and fostering a culture of continuous learning.
- Define the software and integration architecture and establish a technology roadmap that delivers strategic value for the organization.
- Evaluate emerging technologies and technology trends, developing plans to ensure the organization is well-positioned for future advancements while maximizing the value of existing technology.
- Provide strategic technical direction and determine priorities for staff and teams engaged in software and integration engineering projects.

ALL DUTIES AND REQUIREMENTS MUST BE PERFORMED CONSISTENT WITH THE UW HEALTH PERFORMANCE STANDARDS.

JOB REQUIREMENTS

Education	Minimum	Master's degree in Software Engineering, Computer Science, or related field Six (6) years of combined education and relevant experience may be considered in lieu of degree
	Preferred	Doctorate degree in Software Engineering, Computer Science, or related field
Work Experience	Minimum	• Demonstrated success utilizing multiple programming languages, software development tools, databases, operating systems, and file structures necessary

		to design, create, and deliver functional software, with an extensive track record of applying this expertise across diverse projects and technologies • Demonstrated success designing and implementing multiple, diverse technical integrations, technologies, and processing environments (e.g., HL7, FHIR, REST, GraphQL) showing proficiency in architecting robust and scalable solutions that facilitate seamless data exchange and interoperability • Demonstrated success providing exceptional technical leadership to engineering teams, consistently making key decisions about technology stacks, frameworks, and architectural patterns that drive innovation and optimize performance • Demonstrated success in mentoring and nurturing talent in the field of software engineering, with a proven ability to guide team members • Demonstrated success managing and executing large scale projects, delivering high-quality software solutions, accounting for constraints, and mitigating risks • Demonstrated unwavering commitment to continuous learning, proactively staying abreast of the latest trends, technologies, and best practices in software engineering, incorporating them into standard practices and processes
	Preferred	• Two (2) years of experience in a technical leadership role • Thirteen (13) years of progressively responsible professional software or integration engineering experience including design, development, testing, and release • Three (3) years of experience developing software in the health care industry • Experience performing web application planning, development, implementation, and oversight in a complex environment • Experience designing and developing cloud-native applications using Microsoft Azure or other cloud platforms • Experience designing and implementing DevOps capabilities, including the design and automation of infrastructure and application build and deployment • Experience designing and implementing secure application architecture • Experience developing, deploying, and supporting applications in a 24x7x365 environment • Experience designing, implementing, and performing web development workflows, implementation processes, and best practices for managing websites and other interactive media
Licenses & Certifications	Minimum	• None
	Preferred	• Professional Scrum Master, Developer, Product Owner, or related certifications • Microsoft Azure or AWS Administrator, Developer, Architect, or related certifications • ServiceNow Administrator, Developer, Architect, or related certifications • Cloverleaf Developer or other integration engine certifications • Epic Bridges or other Epic application certifications • ITIL Foundation or related certifications • PMP
Required Skills, Knowledge, and Abilities		<u>Core Competencies</u> Advanced competency in the following: • Communication • Critical Thinking • Effective Team Member • Technical Leadership • Agility • Leading Highly Empowered, Self-Directed Teams • Leadership • Leading without Direct Authority Intermediate competency in the following: • Mentor and Teach • Organizational Awareness/Understanding • Demonstrates Business & Financial Acumen • Maintains Strategic Orientation <u>Position Specific Competencies</u> Advanced competency in the following: • Software Architecture

- Technology Awareness & Strategic Planning
- System Analysis & Design
- Software Test Development

Intermediate competency in the following:
- Software Quality
- Continuous Improvement
- Product Management

Other Knowledge, Skills, & Abilities
- Ability to lead as a member of an agile development team and coach others on agile mindset
- Ability to proactively engage others at all levels of the organization
- Ability to drive deliverables and priorities
- Ability to define technical specifications and requirements
- Ability to proactively identify risks before work occurs
- Ability to break down technical problems to root cause and first principles
- Ability to reduce complexity and define elegant solutions and guiding principles
- Exceptional ability to think abstractly and apply these concepts to concrete problems
- Demonstrated ability and desire to quickly learn and apply new technical knowledge and skills
- Demonstrated ability to adapt to new and changing technologies
- Strong logical thought process for design and analysis
- Outstanding analytical, critical thinking, problem-solving, and organizational abilities with attention to detail
- Ability to identify and leverage the most appropriate technological capabilities to solve specific problems
- Ability to design and build solutions which include developing original and innovative approaches
- Ability to synthesize feedback ambiguous and inconsistent feedback and input

PHYSICAL REQUIREMENTS

Indicate the appropriate physical requirements of this job in the course of a shift. *Note: reasonable accommodations may be made available for individuals with disabilities to perform the essential functions of this position.*

	Physical Demand Level	Occasional Up to 33% of the time	Frequent 34%-66% of the time	Constant 67%-100% of the time
X	**Sedentary:** Ability to lift up to 10 pounds maximum and occasionally lifting and/or carrying such articles as dockets, ledgers and small tools. Although a sedentary job is defined as one, which involves sitting, a certain amount of walking and standing is often necessary in carrying out job duties. Jobs are sedentary if walking and standing are required only occasionally and other sedentary criteria are met.	**Up to 10#**	**Negligible**	**Negligible**
	Light: Ability to lift up to 20 pounds maximum with frequent lifting and/or carrying of objects weighing up to 10 pounds. Even though the weight lifted may only be a negligible amount, a job is in this category when it requires walking or standing to a significant degree.	**Up to 20#**	**Up to 10#** or requires significant walking or standing, or requires pushing/pulling of arm/leg controls	**Negligible** or constant push/pull of items of negligible weight
	Medium: Ability to lift up to 50 pounds maximum with frequent lifting/and or carrying objects weighing up to 25 pounds.	**20-50#**	**10-25#**	**Negligible-10#**
	Heavy: Ability to lift up to 100 pounds maximum with frequent lifting and/or carrying objects weighing up to 50 pounds.	**50-100#**	**25-50#**	**10-20#**
	Very Heavy: Ability to lift over 100 pounds with frequent lifting and/or carrying objects weighing over 50 pounds.	**Over 100#**	**Over 50#**	**Over 20#**
Other - list any other physical requirements or bona fide occupational qualifications not indicated above:				

Note: The purpose of this document is to describe the general nature and level of work performed by personnel so classified; it is not intended to serve as an inclusive list of all responsibilities associated with this position.