# UNIVERSITY OF SOUTHERN CALIFORNIA

## Staff Senior Software Engineer (Informatics)

## Job Code: 164009

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**OT Eligible:**        No

**Comp Approval:**        3/20/2020

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## JOB SUMMARY:

Plans, designs, reviews, and provides development oversight for software development life cycle (SDLC) of web applications, identifying staffing and resource requirements, and monitoring progress with status reports. Drives organizational testing strategies and leads incidence response. Anticipates future use cases, and makes design decisions that minimize costs for future changes. Oversees change efforts, leading cross-team strategic efforts in alignment with organizational strategy.

## JOB ACCOUNTABILITIES:

| *E/M/NA | % TIME | |
|---|---|---|
| _____ | _____ | Writes, edits and updates production-ready software application code that's easily testable. Plans, designs, reviews, and provides development oversight for software development life cycle (SDLC) of web applications, identifying staffing and resource requirements, and monitoring progress with status reports. Responsible and accountable for system compliance, security, and audit readiness. |
| _____ | _____ | Drives organizational testing strategies and leads incidence response. Uses quality metrics to identify gaps across all team projects, writing and performing unit tests in accordance with testing pyramid, and employing systematic approaches for debugging all issues within designated scope. |
| _____ | _____ | Architects services and systems using design patterns allowing for iterative, autonomous development and future scaling. Anticipates future use cases, and makes design decisions that minimize costs for future changes. Utilizes abstractions and code isolation, actively working with relevant security stakeholders to search for vulnerabilities. |
| _____ | _____ | Independently handles risk and change within project teams, following team/project philosophies, operational data, and engineering strategies in uncertain situations. Documents all stages of the software development process, ensuring integrity of code by peer review. Builds relationships with fellow engineers, helping resolve each other's problems when requested, and seeking mentorship or guiding junior staff. |
| _____ | _____ | Oversees change efforts, leading cross-team strategic efforts in alignment with organizational strategy. Actively seeks to create or redefine roadmaps across teams related to product opportunities. Ensures expectations are appropriately clarified for continuous integration and incremental delivery. Communicates all research, methodology, and results to leadership and relevant internal/external stakeholders, and research and open-source communities. |
| | | Performs other related duties as assigned or requested.  The university reserves the right to add or change duties at any time. |

**\*Select E (ESSENTIAL), M (MARGINAL) or NA (NON-APPLICABLE) to denote importance of each job function to position.**

## EMERGENCY RESPONSE/RECOVERY:

Essential: ☐ No

☐ Yes  In the event of an emergency, the employee holding this position is required to "report to duty" in accordance with the university's Emergency Operations Plan and/or the employee's department's emergency response and/or recovery plans. Familiarity with those plans and regular training to implement those plans is required. During or immediately following an emergency, the employee will be notified to assist in the emergency response efforts, and mobilize other staff members if needed.

## JOB QUALIFICATIONS:

**Minimum Education:**

Bachelor's degree

**Minimum Experience:**

11 years

**Minimum Field of Expertise:**

Bachelor's degree or higher in computer sciences, computer engineering, electrical engineering, or related discipline. Eleven years' experience with programming and documentation procedures, programming methods and operator instructions. Proven experience in a leadership/management role. Comprehensive knowledge of Amazon Web Services (AWS) and related technologies and methodologies (e.g., agile/scrum, DevOps, incremental delivery). Demonstrated experience with one or more relevant programming languages, and the ability to gain needed contexts for domains. Experience developing and deploying prototypes to scalable pipelines, and applying software development life cycle (SDLC) principles. Demonstrated ability to interpret and apply scalability, reliability, and software engineering best practices (e.g., version control, testing, developer and end-user documentation). Ability to work independently on complex programming activities. Excellent organization, planning, analytical and problem-solving skills. Experience weighing economic costs and values objectively, supporting coworkers on a project basis, and contributing to discussions in a civil manner. Excellent written and oral communication skills.

**Preferred Education:**

Master's degree

**Preferred Experience:**

14 years

**Preferred Field of Expertise:**

Proficiency with Python, Javascript, C/C++, Java, Ruby and/or other advanced programming languages. Experience with Unix/Linux programming and/or administration.

**Supervises:  Level:**

Leads employees performing similar work on a project basis.
May oversee staff, students and/or resource employees

## SIGNATURES:

**Employee: _____**   **Date:_____**

**Supervisor: _____**   **Date:_____**

**The above statements are intended to describe the general nature and level of work being performed.  They are not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of personnel so classified.**

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