



Lead Software Engineer Specialist

Job Description

JOB INFORMATION

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|--------------------------|---|
| <i>Job Code:</i> | 167519 |
| <i>Job Title:</i> | Lead Software Engineer Specialist |
| <i>FLSA Status:</i> | Exempt |
| <i>Supervisory:</i> | Leads employees performing similar work on a project basis. |
| <i>Job Family:</i> | Systems Engineering |
| <i>Job Family Group:</i> | Information Technology |
| <i>Management Level:</i> | 7 Individual Contributor |

JOB SUMMARY

Leads the planning, design, development and implementation of software solutions and frameworks. Responsible for ensuring designs are translated into highly composable code. Determines operational feasibility (e.g., evaluating analysis, establishing problem definitions, proposing solutions). Identifies staffing and resource requirements and monitors progress with status reports.

JOB QUALIFICATIONS:

Education

| <i>Req</i> | <i>Pref</i> | <i>Degree</i> | <i>Field of Study</i> | |
|------------|-------------|-------------------|------------------------|----|
| X | | Bachelor's degree | | |
| | X | Bachelor's degree | Computer Science | Or |
| | X | Bachelor's degree | Computer Engineering | Or |
| | X | Bachelor's degree | Electrical Engineering | |

Additional Education

Check here if experience may substitute for some of the above education.

X Combined experience/education as substitute for minimum education

Work Experience

| <i>Req</i> | <i>Pref</i> | <i>Work Experience</i> | <i>Experience Level</i> | |
|------------|-------------|------------------------|-------------------------|--|
| X | | 8 years | | |
| | X | 10 years | | |

Additional Work Experience

Check here if education may substitute for some of the above work experience.

Combined experience/education as substitute for minimum work experience

Knowledge, Skills and Abilities

| <i>Req</i> | <i>Pref</i> | <i>Functional Skills</i> |
|------------|-------------|---|
| X | | Proven experience in leadership/management roles. |

Knowledge, Skills and Abilities

| Req | Pref | Functional Skills |
|-----|------|---|
| X | | Comprehensive knowledge of Amazon Web Services and related technologies/methodologies (e.g., agile/scrum, DevOps, incremental delivery). |
| X | | Experience performing and leading unit tests, systems integration, and user acceptance. |
| X | | Demonstrated experience with one or more relevant programming languages, able to gain needed contexts for domains. |
| X | | Experience developing and deploying prototypes to scalable pipelines and applying software development lifecycle principles. |
| X | | Demonstrated ability to interpret and apply scalability, reliability, and software engineering best practices (e.g., version control, testing, developer and end-user documentation). |
| X | | Substantial knowledge of security concepts, familiarity with secure code development techniques, and understanding of automated solutions. |
| X | | Ability to work independently on complex programming. |
| X | | Excellent organization, planning, analytical and problem-solving skills. |
| X | | Experience weighing economic costs and values objectively, supporting coworkers on a project basis, and contributing to discussions in a civil manner. |
| X | | Excellent written and oral communication skills, able to provide both detailed information as well as summaries to varied audiences. |
| X | | Ability to build strong, positive working relationships and rapport with diverse groups of team members. |
| | X | Ten years' experience in IT/programming. Proficiency with Python, Javascript, C/C++, Java, Ruby and/or other advanced programming languages. |
| | X | Experience with Unix/Linux programming and/or administration. Experience in higher education. |

Other Job Factors

JOB ACCOUNTABILITIES

| | % Time | Essential | Marginal | N/A |
|--|--------|-----------|----------|-----|
| Plans, designs, reviews, and provides development oversight for the software development lifecycle of web applications, identifying staffing and resource requirements, and monitoring progress with status reports. Writes, edits and updates production-ready software application code that's easily testable. Responsible and accountable for system compliance, security, and audit readiness. | | | | |
| Leads project/task planning, driving the development and implementation of best-in class processes and procedures. 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. Continually improves alignment with goals and customer needs. Produces high-quality deliverables, defining success criteria and measuring progress accordingly. | | | | |
| Manages insights related to customer challenges and needs and translates findings into product strategies. Establishes priorities and gains buy-in for solutions leveraging the customer point-of-view. Acts as a trusted advisor to stakeholders and sets the example for effective customer relationship management. Oversees root cause analyses to identify and solve problems. Monitors and tracks requests to confirm timely resolution. | | | | |
| Monitors the development of production-ready software application code that's easily testable and performs upon implementation. Sets strategies and leads the identification and initiation of process improvement efforts. Ensures code is maintainable, supportable, and scalable with business growth. Develops and prioritizes realistic, customer-focused solutions, leveraging insights on customer pain points and needs. | | | | |
| Independently handles risk and change, 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. Stays current with technology, industry standards and best practices. Leverages the latest technology and anticipates impact on departmental/university software services. | | | | |

JOB ACCOUNTABILITIES

| | % Time | Essential | Marginal | N/A |
|---|--------|-----------|----------|-----|
| Promotes an environment that fosters inclusive relationships and creates unbiased opportunities for contributions through ideas, words, and actions that uphold principles of the USC Code of Ethics. Builds relationships with fellow engineers, helping resolve each other's problems when requested. Guides junior staff, creating opportunities to develop skills, knowledge and abilities. Contributes to university compliance and security governance policies by embedding standards, procedures, and quality measures into work plans and workflows. | | | | |

Other Requirements

| Essential: | Emergency Response/Recovery | Essential: | Mandated Reporter |
|--|--|------------|---|
| | 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. | | A mandated reporter who in his or her professional capacity has knowledge of, or reasonably suspects a person who is under the age of 18 years, elderly, or a dependent adult has been the victim of abuse or neglect must report the suspected incident. The reporter must contact a designated agency immediately or as soon as practically possible by telephone or in writing within 36 hours. By virtue of the associated job duties, this position qualifies as a mandated reporter as required by state law and USC's policy at: https://policy.usc.edu/mandated-reporters/ |
| Campus Security Authority (CSA) | | | Essential: |
| By virtue of the associated job duties, this position qualifies as a Campus Security Authority as required by law and USC's policy at: https://dps.usc.edu/alerts/clery/ | | | No |

ACKNOWLEDGMENTS

The above statements reflect the essential and non-essential functions as necessary to describe the principle contents of the job. They are not intended to be a complete statement of all work requirements or duties that may be required of the position. I understand that I may be asked to perform other duties as assigned. USC reserves the right to add or change duties at any time.

The University of Southern California is an Equal Opportunity Employer. USC prohibits discrimination on any basis protected under federal, state, or local law, regulation, or ordinance or university policies. All employment decisions are based on individual qualifications and business need.

I acknowledge receipt of this job description and its associated physical requirements. I have read and understand the job description and job requirements and agree to abide by their contents. I realize that duties may be requested of me that are not specifically stated herein. I understand that I will be expected to adjust to potential fluctuations in work volume. I understand that, if I have any questions about the essential functions or expectations of my position, my supervisor and/or HR partner are available to discuss them with me.

Print Employee Name

Signature

Date

Print Manager Name

Signature

Date

This job description describes the general nature and level of work required by the position. It is not intended to be an all-inclusive list of qualifications, skills, duties, responsibilities or working conditions of the job. The job description is subject to change with or without notice, and Management reserves the right to add, modify or remove any qualification or duty. Nothing in this job description changes the existing at-will employment relationship between the university and the employee occupying the position.