



#### JOB INFORMATION

<i>Job Code:</i>	167517
<i>Job Title:</i>	Senior Software Engineer
<i>FLSA Status:</i>	Exempt
<i>Supervisory:</i>	May oversee staff, students and/or resource employees
<i>Job Family:</i>	Systems Engineering
<i>Job Family Group:</i>	Information Technology
<i>Management Level:</i>	7 Individual Contributor

#### JOB SUMMARY

Designs, develops and maintains software solutions and frameworks, and supports the determination of operational feasibility (e.g., evaluating analyses, defining problems, developing solutions). Implements software solutions, prioritizing information needs and collaborating with a broad range of customers, partners, and key stakeholders.

#### 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.*

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		5 years		
	X	8 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		Five years' experience with programming and documentation procedures, methods and operator instructions.
X		Experience conducting unit/performance tests, systems integration and user acceptance.

## Knowledge, Skills and Abilities

Req	Pref	Functional Skills
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		Excellent organization, planning, analytical and problem-solving skills.
X		Proven ability to provide technical expertise and creative solutions while aligned to organizational objectives and customer needs.
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		Substantial knowledge of security concepts, familiarity with secure code development techniques, and understanding of scalable and automated solutions.
X		Ability to build strong, positive working relationships and rapport with diverse groups of team members.
	X	Eight 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.
	X	Experience in higher education.

## Other Job Factors

## JOB ACCOUNTABILITIES

	% Time	Essential	Marginal	N/A
Writes, edits and updates production-ready software application code that's easily testable and performs upon implementation. Evaluates and applies various algorithms, methodologies, and tools (e.g., Python, Amazon SageMaker, AWS Lambda) to determine available solutions and associated risks and benefits. Ensures code is maintainable, supportable, and scalable with business growth.				
Architects services and systems using design patterns allowing for iterative, autonomous development and future scaling. Utilizes abstractions and code isolation, actively working with relevant security stakeholders to search for vulnerabilities. Drives change efforts, fostering a culture of prioritization in alignment with organizational strategy. Anticipates future use cases and makes design decisions that minimize costs for future changes.				
Utilizes an automation framework to design and implement tests of the efficiency, responsiveness, and regulation compliance of web applications. Uses quality metrics to identify gaps, writing and performing unit tests in accordance with testing pyramid, and employing systematic approaches for debugging all issues within designated scope. Ensures integrity of code by peer review.				
Manages work activities against the software development lifecycle. Stays current with technology, industry standards and best practices. Facilitates innovation and the creation and initiation of continuous process improvements. Leverages the latest technology and anticipates impact on departmental/university software services.				
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. Builds and maintains effective customer and stakeholder relationships. Handles and routes requests to appropriate parties for tracking and resolution, providing timely follow-ups and feedback.				
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, and seeking mentorship or guiding junior staff. Contributes to university compliance and security governance				

**JOB ACCOUNTABILITIES**

	<i>% Time</i>	<i>Essential</i>	<i>Marginal</i>	<i>N/A</i>
policies by embedding standards, procedures, and quality measures into work plans and workflows.				

**Other Requirements**

<i>Essential:</i>	<i>Emergency Response/Recovery</i>	<i>Essential:</i>	<i>Mandated Reporter</i>
	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: <a href="https://policy.usc.edu/mandated-reporters/">https://policy.usc.edu/mandated-reporters/</a>
<i>Campus Security Authority (CSA)</i>			<i>Essential:</i>
By virtue of the associated job duties, this position qualifies as a Campus Security Authority as required by law and USC’s policy at: <a href="https://dps.usc.edu/alerts/clery/">https://dps.usc.edu/alerts/clery/</a>			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.