

San Jose State University Research Foundation

Position: Senior Research Associate (Site Reliability Engineer)

DEPARTMENT:	Research will be done under the offices of the Psychology Department at Jose State University
IMMEDIATE SUPERVISOR:	Project Director, NASA program
POSTING DATE:	12/3/2018
CLOSING DATE:	Posted Until Filled
SALARY:	\$110,000 - \$130,000, DOQ/E Full time Excellent Benefits
EXEMPT STATUS:	Exempt

GENERAL NATURE OF POSITION:

Do you want to help support NASA's missions, but don't want to go through astronaut training camp? Do you like making a difference in the world and help progress the vision of NASA? We are a group of developers and designers working in contract with NASA under the Human Computer Interaction (HCI) Research Group to make Mission Assurance Software. We work for the San Jose State University Research Foundation in a partnership with NASA through grant funding. The research is centered on the development, design and testing of next-generation mission ground-systems for NASA's space explorations missions. You will work with people across NASA, hear about upcoming missions and how we help support them.

The position of Senior Research Associate Site Reliability Engineer focuses on keeping our platform up at all times for critical space missions. Your experience will guide us to the next level of high-availability and performance as we grow as a team and provide our HCI research-based software to NASA. With expertise in critical environments, you will advise us on ways to accomplish our production goals and give our users a seamless experience.

Our work environment is very open, collaborative and welcoming to others. We are a diverse and tight-knit team who enjoys off-site team building events and activities. We believe that having a comfortable environment for everyone is important! Our team values a healthy approach to the workplace, from providing adjustable desks to maintaining a balanced work-life schedule. You will contribute to our wide diversity of skills and incorporate new ideas into our environment.

ESSENTIAL DUTIES & RESPONSIBILITIES:

- 1) Troubleshooting and monitoring production systems to ensure the highest uptimes are maintained.
 - 2) Support and improve upon existing high-availability architecture solutions.
 - 3) Maintain health and availability of the Percona (MySQL) databases.
 - 4) Support Cross-Program data integrations to ensure the ability for distributed and highly-available data queries.
 - 5) Other duties as assigned.
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QUALIFICATIONS:

1) Education and Experience

- a) A Bachelor's degree, or equivalent experience, in related field such as Computer Science required.
- b) A minimum of five years direct experience supporting and designing databases in a high-availability environment.
- c) At least three years of experience in troubleshooting and monitoring multi-site services.

2) Knowledge, Skills and Abilities:

Required

- a) Strong experience with supporting MySQL availability (master/slave relationships)
- b) In-depth knowledge of Linux-based operating systems like RedHat Enterprise (RHEL7), CentOS, or Ubuntu.
- c) Strong in scripting languages such as Python, Perl, or PHP (web).
- d) Ability to logically troubleshoot through problems to identify the root cause in time-sensitive situations.
Monitoring experience such as Splunk, Prometheus, Graphite, OpManager
- e) Experience supporting and troubleshooting Redis, Solr, or similar tools.
- f) Automation of CI/CD pipeline with industry tools such as Jenkins, Bamboo, or other. Additionally, Ansible, Chef, Puppet or some other automation tool experience.
- g) Flexibility to work altered schedule to correspond to major deployment times and occasional after-work time if critical outages occur. (This is very minimal/infrequent).
- h) A positive attitude and willingness to help others and stay on top of new technologies is highly valued.
- i) Enjoy problem solving with a team and coming up with creative solutions based on your experiences.

Desired:

- a) Technical writing, including the ability to document processes and create diagrams for presentation of ideas.
- b) Experience in MySQL database performance tuning and optimization, including normalization, slow query log, debugging, performance schema, and monitoring.
- c) Exposure to the AWS platform.
- d) Experience with modern container technologies such as Docker, Kubernetes, or other orchestration tools.
- e) Experience using database proxy software like ProxySQL or HAProxy
- f) Work well in a team environment but can also work well without extra oversight: self-driven.
- g) Exposure to fullstack support, in order to help troubleshooting of problems (React, NodeJS, Nginx, etc) preferred. Likewise, some exposure to Application Performance Monitoring software like Dynatrace, AppDynamics, or Sensu is preferred.
- h) Familiarity with DNS load-balancers such as F5 BIGIPs (GTM)
- i) Security-minded and exposure to standards organizations like NIST.

3) Physical requirements

- a) Occasional travel to other NASA sites may be required.
- b) Located at NASA Ames Research Center. Therefore, the employee must meet security qualifications for entrance to the Center, including an Agency background check.
- c) Employee must be a US citizen or Permanent Resident.
- d) The location is equipped for full accessibility.
- e) This is a local position on –site at Moffett Field and not a remote position.

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4) Complexity of Duties

Exercises independent judgment in the management and completion of a diverse set of tasks.

5) BENEFITS:

The comprehensive benefit package includes:

- a) Nine Health Insurance Plans to choose from
- b) Free dental and vision for employee and family
- c) Paid Federal & State Holidays
- d) Retirement Plan: 403 (b) employee contribution plan component and a 403 (b) employer contribution component
- e) Vacation and separate sick plans
- f) Employee Discounts
- g) Paid Training and Conferences
- h) Increases based on merit (performance)

INTERPERSONAL CONTACTS: Reports to the NASA Project Director. Interacts with NASA Ames civil service and Foundation research staff, including student assistants, on a daily basis. Works daily with the on-site design, QA, and development teams at NASA Ames.

SUPERVISORY RESPONSIBILITIES:

No formal responsibilities, though will be called upon for advice and direction by others.

APPLICATION PROCEDURE

To apply for this position, an applicant must submit a formal application for employment, as well as a resume and a cover letter. The applicant may do this via e-mail or by regular mail. The formal employment application is located at

http://www.sjsu.edu/researchfoundation/open/Employment%20Application%20Form_new.pdf

It may also be obtained from the Research Foundation through its web site at

<http://www.sjsu.edu/researchfoundation/open/index.html>.

An applicant may also apply in person by visiting the Research Foundation, located at 210 North 4th Street, 4th Floor, San Jose, CA (corner of St. James and North 4th Streets). Please address your formal application, your resume and your letter of interest directly to:

San Jose State University Research Foundation
Attn: HR/Job Code SR. Researcher DBA
210 North 4th Street
San Jose, CA 95112
E-mail: foundation-jobs@sjsu.edu

The Research Foundation provides excellent benefits package to benefited employees. Please visit <http://www.sjsu.edu/researchfoundation/humanresources/benefits/index.html> to get more details.

Research Foundation employment is separate and distinct from San Jose State University or State of California employment. Research Foundation employees are not employees of either SJSU or of the state of California.

The San Jose State University Research Foundation (SJSURF) is a non-profit auxiliary of San Jose State University. SJSURF is totally self supported. The majority of the organization's funding comes from the federal government, and other public and private entities. With annual revenues totaling over \$65 million,

programs managed through SJSURF cover a rich diversity of applied research, public services, and educational related activities.

SAN JOSE STATE UNIVERSITY RESEARCH FOUNDATION is an Equal Opportunity Employer and does not discriminate on the basis of race, color, creed, gender, religion, marital status, registered domestic partner status, age, national origin, ancestry, physical or mental disability, medical condition, sex, genetic information, sexual orientation, military and veteran status or any other consideration made unlawful by federal, state, or local laws. It also prohibits unlawful discrimination based on the perception that anyone has any of those characteristics, or is associated with a person who has or is perceived as having any of those characteristics.

The SJSURF has implemented California State University Executive Order 1083 (<http://www.calstate.edu/eo/EO-1083.pdf>). By policy, all SJSURF employees are mandated reporters for suspected child abuse or neglect and are expected to undergo formal training in accordance with the directives of the Executive Order.

The SJSURF has also implemented California State University Policy Memorandum HR 2015 – 08 (<http://www.calstate.edu/HRAdm/pdf2015/HR2015-08.pdf>).

A background check (including a criminal records check) must be completed satisfactorily before any candidate can be offered a position with the SJSURF. Failure to satisfactorily complete the background check may affect the application status of applicants or continued employment of current SJSURF employees who apply for the position.

