

San José State University Research Foundation

Position: Senior Research Associate: Java Engineer

DEPARTMENT: NASA Ames

IMMEDIATE SUPERVISOR: Project Director

POSTING DATE: 05/03/2022

CLOSING DATE: Open Until Filled

SALARY: \$120,000 to \$175,000 annually/DOE

EXEMPT STATUS: Full-Time, Exempt, Benefited

GENERAL NATURE OF POSITION

Our team is working on making the futuristic, autonomous air-taxi system from *The Jetsons* a reality. If you love building visually inspiring, data-driven applications, then join our team on our spectacular mission! The Department of Psychology at San José State University is involved in collaborative research with civil service scientists from Airspace Operations Laboratory in the Human Systems Integration Division (HSID) at the NASA Ames Research Center in Mountain View, CA. We seek a senior research associate: Java software engineer to collaborate on and engage in software development activities to further NASA's aeronautics research.

Our team at NASA Ames Research Center is looking for a talented, creative, and dedicated individual to join our small team of developers, within a larger team of domain knowledge experts and researchers. Our developers work directly with researchers, designers, end users, human-factors participants, NASA management, and other stakeholders to ensure delivery of software meeting project objectives. Background or interest in autonomous vehicles, aeronautics, human-systems interaction, and/or control theory is useful/desirable. Having a passion to excel and contribute to team success is a must. We believe in collaborating and owning the entire agile application lifecycle—requirements, design, development, deployment, documentation, support, celebration, and fun!

Our work environment is very open, collaborative, and welcoming; we are a diverse and tight-knit team. We believe that fostering a comfortable workplace for everyone is important! Our team values a healthy approach to our work and maintaining a balanced work-life schedule. You will contribute to our wide diversity of skills and incorporate new ideas into our working environment.

ESSENTIAL DUTIES & RESPONSIBILITIES

1. Design, build, test, and maintain software for airspace operations research.
2. Develop laboratory capabilities for real-time data collection, monitoring, and visualization.
3. Integrate third-party open source and commercial packages into existing infrastructure.

4. Prototype new aeronautics support applications in an iterative development environment.
 5. Create high quality, robust, and easily maintainable software.
 6. Document and track software tasks in issue tracking systems.
 7. Build and enhance scripts that exercise end-to-end functionality.
 8. Work on a wide range of technologies including full stack development, mobile apps, and databases.
 9. Collaborate with fellow researchers to prepare, conduct, and analyze experiments relating to the use of software for airspace operations research.
 10. Work directly with researchers and project stakeholders to ensure proper software design and delivery.
 11. Assist in the development and preparation of papers related to the experiments performed in the AOL to be presented at various conferences held throughout the year.
 12. Assist with collaborative remote, on-site, and field experiments, possibly in different time zones.
 13. Other duties and tasks as assigned.
-

INTERPERSONAL CONTACTS

Reports to the project director. Interacts with NASA Ames civil service and SJSU Research Foundation staff, including student assistants, on a daily basis.

SUPERVISORY RESPONSIBILITIES

No supervisory responsibilities, though may be called upon for advice and direction by others.

QUALIFICATIONS

Education and Experience

- M.S. in Computer Science, Computer Engineering, or related field (or 10 years of relevant job experience involving software development) required.
- Ten or more years of experience with Java required.
- Five or more years of experience with JavaScript and related web-development frameworks required.
- Five or more years of experience with relational and NoSQL database systems required.
- Five or more years of experience writing scripts to automate various development and testing activities required.
- Five or more years of experience working in an agile development environment required.
- Five or more years of experience integrating multiple internal and external systems using APIs required.
- Three or more years of experience with scientific experimentation and all various phases therein (experimental design, research methods, data mining & analysis, etc.) preferred.

Knowledge, Skills, Abilities Required

- Highly organized, self-motivated, and ability to think critically.
- Thorough understanding of programming principles and paradigms, such as OOP and MVC.
- Understanding of Agile methodology for software development.
- Knowledge of coding and security best practices.
- Familiarity with public-key cryptography, OAuth 2.0, and authorization services.
- Experience with Swagger CodeGen and/or OpenAPI code-generation tools.
- Willingness to work in a user-centered, design-driven development model.
- A dedication to quality, and a positive, collaborative attitude and approach to development and testing.

- Able to find opportunities for improvement and tackle them without external direction.
- Methodical and detail-oriented, with solid analytical skills and problem-solving ability.
- Ability to create scalable, redundant, and high-performance software services.
- Capacity and willingness to adopt new methodologies and skills in line with core responsibilities.
- Excellent written and oral communication skills.
- Strong interpersonal skills.
- Ability to work effectively and efficiently in culturally and organizationally diverse research teams.
- Willingness to share knowledge and skills with colleagues, to help train colleagues in new technical skills, and to provide professional/technical mentorship to junior team members, including student assistants.

Physical Requirements

- Frequent and ongoing use of a computer terminal to conduct a variety of software development tasks.
- Strength, dexterity, coordination, and/or ability to use a computer keyboard and read a video display terminal on a regular basis.
- Work with time constraints and under pressure.
- Occasional travel to other sites may be required.
- Located at NASA Ames Research Center. Therefore, the employee must meet security qualifications for entrance to the Center, including an Agency background check.
- Candidate will be a U.S. citizen or permanent resident.
- Ability to work on-site (NASA Ames Research Center, Mountain View, CA).
- The location is equipped for full accessibility.

Complexity of Duties

- Exercises independent judgment in the management and completion of a diverse set of concurrent tasks, including leading specific research and/or project management efforts.

NOTE: This position description intends to describe the general nature and level of work being performed by people assigned to this job. It is not intended to include all duties and responsibilities. The order in which duties and responsibilities are listed is not significant.

BENEFITS

The San José State University Research Foundation (SJSURF) provides excellent benefits package to benefited employees. **The comprehensive benefit package includes:**

- a) Nine company subsidized CalPERS health insurance plans to choose from (employee contributions differ according to plan and level of coverage).
- b) Employer paid dental and vision for both employee and eligible dependents.
- c) Life, AD&D, LTD with supplemental coverage opportunities.
- d) 14 paid federal & state holidays.
- e) Retirement Plan: 403 (b) employee contribution plan component and a 403 (b) employer contribution component, which vests immediately.
- f) Vacation hour accruals and separate sick hour accumulations.
- g) Employee discounts.
- h) Paid training and professional development conferences.

Please visit the [Benefits & Compensation page](#) on the SJSU Research Foundation website for more detailed information.

COVID-19 VACCINATION POLICY

As required by the CSU Vaccination Policy, all new hires must be fully vaccinated against COVID-19 starting on September 30, 2021. Fully vaccinated means it has been 14 days after the second dose of the Pfizer or Moderna vaccine has been given, or it has been 14 days after the one dose of the J&J vaccine has been given. Additionally all employees are required to have booster shots and provide proof to SJSU by 02/28/2022 or after the six months from the final dose of the original vaccination, whichever is later. Proof of being fully vaccinated does not need to be disclosed until a job offer has been made, and proof must be submitted after the acceptance of the job offer. New hires may request a reasonable accommodation of the COVID-19 vaccination requirement based on medical or religious reasons. New hires must submit their request for an accommodation form after they accept the job offer, and before their scheduled start date. The reasonable accommodation provided to the employee, if any, will depend on the employee's job and the applicable facts, but it may include weekly COVID-19 testing. New hires who do not submit, before their scheduled start date, proof of being fully vaccinated or a request for reasonable accommodation will have their job offer revoked.

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 formal employment application is located on the SJSURF website on the [Forms page](#). **All candidates must submit their application materials to foundation-jobs@sjsu.edu. Please add **JA ENG NASA** to the subject line of the email.**

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.

REASONABLE ACCOMODATION

The San José State University Research Foundation (SJSURF) is committed to providing access, equal opportunity, and reasonable accommodation for individuals with physical or mental disabilities in the employment, recruitment, examination, hiring and interviewing processes. If you are a job seeker with a physical or mental disability and require a reasonable accommodation to search, apply, or interview for a job opening or otherwise need a reasonable accommodation during the application and hiring process, please contact us at foundation-jobs@sjsu.edu. In the email message, please indicate your full name, phone number and the type of assistance required. You must not reveal the underlying medical reason for your needed reasonable accommodation or otherwise disclose confidential medical information.

ABOUT THE SJSU RESEARCH FOUNDATION

SJSURF employment is separate and distinct from San José State University or state of California employment. SJSURF employees are not employees of SJSU or of the state of California.

SJSURF is a non-profit auxiliary of San José 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.

SJSURF 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.