Software Engineer - 67671

Description

JOB PURPOSE:

Folding@home ([http://folding.stanford.edu](http://folding.stanford.edu)) is the world’s largest distributed computing project, using the power of CPUs, GPUs, and smartphones contributed by over 180,000 volunteers from around the world to study and fight diseases like Alzheimer’s, cancer, and infectious diseases such as Ebola. As the primary software engineer for Folding@home, you will be responsible for coordinating the development of the software pipeline from identifying needs and designing new features, to programming and testing the code, to supporting the Folding@home users. Your technical contributions, interactions with researchers, and working relationships with industrial partners like NVIDIA and Sony will make you a critical part of advancing this unique and valuable resource for the research community.

CORE DUTIES*:

• Design and implement solutions to improve the performance and usability of the Folding@home backend code that distributes molecular dynamics computations to hundreds of thousands of clients.

• Maintain and update the Folding@home infrastructure, as needed. Key tasks include:
  - Migration of the latest version of the underlying molecular dynamics engine OpenMM into the Folding@home framework
  - Working with the team to ensure that the infrastructure remains up and running

• Interact with a variety of users, as well as our industrial partners, for support and planning purposes. This individual will:
  - Collaborate with partners, such as GPU manufacturers NVIDIA and AMD, on the release of new Folding@home cores
  - Actively participate in both the OpenMM and Folding@home support forums
  - Assess user needs based on information gathered from those who submit jobs to Folding@home and from those donating computing power to Folding@home

• Document changes to Folding@home for end users

• Serve as a technical resource with respect to the Folding@home applications, including troubleshooting and solving technical problems that may arise

• Research, evaluate, and implement new technologies to enhance the Folding@home infrastructure

* Other duties may also be assigned

Qualifications

MINIMUM REQUIREMENTS:

Resume AND Cover Letter
Both a resume and a cover letter must be submitted through the Stanford Careers website to be considered for this position.

Education & Experience:
Bachelor's degree in Computer Science or equivalent
Five years of relevant software experience

Knowledge, Skills and Abilities:

Required
• Minimum of five years of experience with Python
• Working knowledge of running web applications through cloud providers, particularly Amazon Web Services
• Practical grasp of authorization technologies and security issues
• Expertise in designing, developing, testing, and deploying applications
• Ability to define and solve logical problems for highly technical applications
• Knowledge of and ability to select, adapt, and effectively use a variety of programming methods
• A basic knowledge of software engineering principles
• Demonstrated success in following through and completing projects
• Excellent organizational skills and attention to detail
• Strong verbal and written communication skills with both technical and non-technical clients

Desired
• Database administration
• Ability to program applications for Windows, Linux, and mobile platforms
• Familiarity with GPU programming, JavaScript, C++, and Go
• Ability to recognize and recommend needed changes in user and/or operations procedures
• Experience in scientific algorithm development, high performance computing applications, and molecular dynamics simulations

Note: This is a two-year fixed position that would be extended if funding permits.

Certifications and Licenses:
• None

PHYSICAL REQUIREMENTS*:

• Constantly perform desk-based computer tasks.
• Frequently sit.
• Occasionally stand/walk, writing by hand.
• Rarely use a telephone, lift/carry/push/pull objects that weigh up to 10 pounds.

* - Consistent with its obligations under the law, the University will provide reasonable accommodation to any employee with a disability who requires accommodation to perform the essential functions of his or her job.

WORKING CONDITIONS:

• May work extended hours.

WORK STANDARDS:

• Interpersonal Skills: Demonstrates the ability to work well with Stanford colleagues and clients and with external organizations.
• Promote Culture of Safety: Demonstrates commitment to personal responsibility and value for safety; communicates safety concerns; uses and promotes safe behaviors based on training and lessons learned.
• Subject to and expected to comply with all applicable University policies and procedures, including but not limited to the personnel policies and other policies found in the University's Administrative Guide, http://adminguide.stanford.edu.

Final offers of employment are contingent upon successful completion of national criminal background check, national sex offender registry search and, where applicable, driving record.

Stanford is an equal opportunity employer and all qualified applicants will receive consideration without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, veteran status, or any other characteristic protected by law.

Job
: Information Technology Services
Location
: School of Humanities and Sciences
Schedule
: Full-time
Classification Level: I