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Requisition Number: 596

Job Title: Sr. Software Engineer

Area of Interest: Software Engineer

City: Cambridge

State/Province: Massachusetts

Job Description: SENIOR SOFTWARE ENGINEER I, Broad Institute-Genome Sequencing and Analysis Group, Medical Population Genetics Program to help design and implement a general-purpose toolkit for applying next-generation DNA sequencing to medical genetics as part of a lively team and wider community of computational biologists, medical geneticists, and software engineers. Will implement the full software life cycle for our publically available genome analysis data management system for processing and analyzing next-generation DNA sequencing data. Pipeline is currently in use by many major research projects including the 1000 Genomes Project to process tens of terabytes of data each week (see <http://www.broadinstitute.org/gsa/wiki> for more details).

Characteristic duties include:

- Communicating with Program leadership to establish programming framework and toolset direction, including creating product roadmaps and establishing requirements, implementing these requirements, and managing the test and release of those components to the community
- Working with members of the group to implement and optimize successful data processing algorithms for use by the broader community; providing programming support across a diverse range of Program projects; and with scientists collaboratively in a fast-paced environment
- Designing, implementing and supporting infrastructure for reliable, high-performance analysis of continuously generated, enormous data sets in a large-scale distributed environment
- Ensuring that designs meet performance and robustness requirements. Leads optimization and parallelization efforts where needed. Proactively makes technical recommendations to senior staff and manager; documents planning, design, issue resolution and other technical information for modules under his/her responsibility
- Participating in internal and external working groups to improve toolset integration

Must enable the research of program scientists through excellent communication, teamwork, and a focus on creating usable and accessible research software tools that consistently meet or exceed development milestones.

Requirements: exceptional programming abilities demonstrated by a top-tier bachelor's degree in computer science or equivalent with 8+ years of software development experience. Must possess excellent general computational and programming skills; have expert knowledge of Java or C/C++ and a high-level language like Python as well as the capability to quickly learn other languages as needed. Excellent oral and written English communication skills required. Must enjoy contributing as a member in an interactive team environment. Must be able to handle a variety of tasks, effectively solve problems with numerous and complex variables, and be able to shift priorities rapidly.

Broad will not offer visa sponsorship for this opportunity.

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