

**Opportunity Title:** Post-Bachelor's Research Associate Software Engineer

**Opportunity Reference Code:** ORNL14-19-BSD

**Organization** Oak Ridge National Laboratory (ORNL)

**Reference Code** ORNL14-19-BSD

**Description** We seek a highly motivated individual to work on designing and maintaining web interfaces within the 'MEAN stack' framework in the Oak Ridge National Laboratory (ORNL) Biosciences Division. The individual will be able to work with a software development team using MongoDB, ExpressJS, AngularJS, and Node.js to support a diverse group of scientists focused on the bioinformatics aspects of ORNL's initiative in complex biological systems. ORNL engages in DOE mission-driven research in comparative genomics, structural biology, computational biology and bioinformatics. The individual will work on designing, maintaining, and updating web interfaces for existing projects in bioenergy and microbial-plant interfaces. The successful candidate will work in a highly skilled, team-oriented environment applying knowledge of cellular, molecular, and computational biology to create aesthetically pleasing, user-friendly web interfaces capable of displaying large datasets to a large number of simultaneous users.

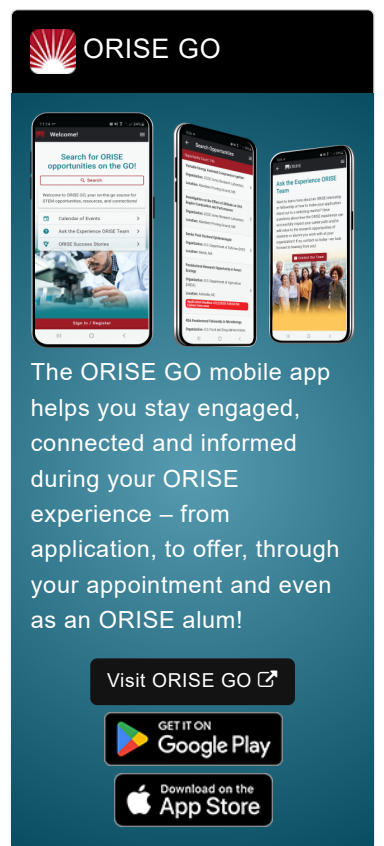
Oak Ridge National Laboratory is one of the world's premier centers for R&D on energy production, distribution, and use and on the effects of energy technologies and decisions on society. Clean, efficient, safe production and use of energy have long been our goals in research and development. At ORNL, unique facilities for energy-related R&D are used both for technology development and for fundamental investigations in the basic energy sciences that underpin the technology work.

**Major Duties/Responsibilities:**

The successful candidate will work with MongoDB, ExpressJS, AngularJS, Node.js, and with other modern user interface stacks, and will be responsible for web interface development and maintenance for the Comparative Genomics group at ORNL.

**Duties include:**

- Conceptualizing, designing, and developing web interfaces
- Integrating data sets from multiple platforms with web interfaces, including phenotypic and experimental data combined with "OMICS" platforms, such as genomics, proteomics, and metabolomics
- Partnering with peers to identify opportunities for process improvement, knowledge transfer, and reuse of existing informatics solutions, algorithms, platforms, and pipelines for data analysis and integration
- Acting as a consultant for staff regarding informatics requirements, data analysis and analysis platforms; mentoring others in the techniques of data collection, mining and management
- Understanding and instructing on the strengths and limitations of analysis platforms as they apply to experimental endpoints; setting expectations and defending results through direct communication with principal investigators



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and their staff

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Qualifications Required:

The successful candidate will

- have experience in designing and maintaining web interfaces;
- demonstrate experience in developing applications geared towards systems biology and be experienced in managing informatics projects;
- have strong programming skills in at least one scripting language such as R, Python, Ruby, or Perl;
- be highly skilled in verbal and written communication across diverse technical, non-technical, and scientific audiences;
- have a good working knowledge of NoSQL and RDBMS database design and database applications development;
- Applicants cannot

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
  - **Degree:** Bachelor's Degree received within the last 36 month(s).
  - **Discipline(s):**
    - **Computer, Information, and Data Sciences** ([16](#))

**Affirmation** I certify that I have completed coursework towards a degree in science, technology, engineering, mathematics, or a related field.

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