Data Engineer

Who are we?

As the largest open science laboratory in the national lab system, for 75 years, Oak Ridge National Laboratory (ORNL) has been a world leader in science and engineering. From developing the world's first operational nuclear reactor, to discovering the Y chromosome, to helping discover new elements such as Tennessine in 2016, to launching the fastest supercomputer in the world, Summit, in 2018, our research and development is spread across numerous domains, but they all have one thing in common, they change the world.

Who are we looking for?

We are looking for a data engineer to enable scientific breakthroughs to be deployed at scale that will have direct and measurable impact on millions of people. As part of the Geographic Information Science and Technology (GIST) Group within the Computational Sciences and Engineering Division, you will help design and build data intensive architectures that facilitate the deployment of state of the art data science, machine learning, and artificial intelligence solutions. We're looking for engineers who bring fresh ideas from all areas, including information retrieval, distributed computing, large-scale system design, networking and data storage, and artificial intelligence.

The GIST group is focused on building geographic data driven solutions that enable scientific discoveries to be deployed for a wide array of uses, including projects that use large scale deep learning to improve worldwide humanitarian response, building IoT enabled tools for local governments, and deploying high impact solutions for national security. As a data engineer in the GIST group, you will work on specific projects with opportunities to switch projects as you and our team continues to grow and evolve.

For this position we are looking for engineers that want to take on new challenges, who will work as part of an Agile team to define, build, test, and deploy a large scale geographic data science solution. If you have experience in large scale data storage, fault tolerant distributed computing, batch and streaming processing, or infrastructure creation and management we encourage you to apply.

Working at ORNL

If your only notion of a national lab is from Stranger Things, then working at ORNL is not what you might think. ORNL has an innovative and fast paced culture that rewards open source software development, has a flexible work schedule, and extremely competitive pay with industry. On any given day, after listening to a talk from a Nobel Laureate, you can ride your bike across campus, go to spin class, or visit the full service primary care clinic.

And, yes, you can wear jeans to work.

Living in East Tennessee

It's easy to overlook everything East Tennessee has to offer if you haven't had the opportunity to spend time here. From spending your weekends downtown at Knoxville's farmers market, Brewers' Jam, the Rhythm n' Blooms Music Festival, or the Dogwood Arts Festival, to some of the best hiking, kayaking, and camping in the U.S., not only in Great Smoky Mountains National Park but all over the greater area, East Tennessee has something to offer everyone.

Contact

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Apply Here

ORNL is managed by
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Basic Qualifications

- BA/BS degree or equivalent experience; Computer Science, Math, Engineering, or similar fields
- 3+ years of experience as a technical specialist
- 5+ years of programming experience in languages such as Java, C/C++, Scala, Python
- RDBMS skills – SQL, optimization techniques, etc.
- Hands-on technical big data architecture experience
- Understanding and hands on working experience with distributed computing

Note: In this position you are not expected to publish academic articles or attend academic conferences, although doing so is certainly supported.

Preferred Qualifications

- Master's degree in Computer Science, Math, Engineering, or similar fields or BA/BS with 5+ years of experience as a technical specialist
- Hands on experience in large-scale global data warehousing and analytics projects
- ETL / ELT – understanding and custom coding
- Caching and queueing technologies – Kafka/Kinesis, ActiveMQ, Redis/Memcache etc.
- Hands on experience working with search engine technology – Lucene, Elasticsearch, Solr
- Working experience with Hadoop Distributed File Systems
- Understanding of API design best practices
- NoSQL understanding and use case application – Cassandra, HBase, DyanoDB
- Lambda architecture understanding and use case applications
- Real time streaming technologies and time series with tools such as Spark, Flink, Samza etc.
- Understanding and use cases application of columnar data stores, such as Parquet
- Experience with geospatial database technologies like PostGIS, tileDB, etc.
- Experience with processing, storing, and querying spatiotemporal or IoT data
- Experience with geospatial data standards and image processing libraries – NITF, GDAL, Proj.4, etc.
- Experience with building reactive microservices and OGC-compliant web services.
- Excellent understanding of operating systems including troubleshooting
- Ability to travel when needed. Up to 10%
- Strong verbal and written communication skills, with the ability to work effectively across internal and external organizations.

Note: This position does not require a DOE Clearance currently. The ability to obtain a DOE clearance, however, would be beneficial to participate or to lead classified projects that may be awarded in the future.