POSITION: Software Engineer
REPORTS TO: Director of Computational Biology
DEPARTMENT: Computational Biology
STATUS: Exempt

POSITION OVERVIEW

TwinStrand Biosciences is a Seattle-based genomics company focused on developing cutting-edge approaches for early detection of cancer, treatment optimization, and risk prediction using our ultra-accurate Duplex Sequencing Technology. We are seeking a highly motivated contributor to join our team as a Software Engineer.

The Software Engineer develops custom tooling, databases, and infrastructure as code that enable rapid and accurate analysis of Duplex Sequencing datasets. You will specifically own the development of tool and process architecture that will migrate data points and metrics from Duplex Sequencing analysis into relational databases for fast query and integration into a currently evolving Laboratory Information Management System (LIMS). A qualified candidate will have a high degree of experience across different database types and query languages for accessing data.

A highly qualified candidate will understand the best practices of relational modelling which include schema design, table normalization, and indexing such that we spend less time migrating tables and more time extracting valuable information from our immense catalog of NGS data. The Software Engineer will also perform web application development in an effort to build data portals, dashboards, and visualization tools to facilitate efficient interpretation of sequencing results in real-time.

Since the day the company was founded, we have valued quality tooling and processes that have enabled us to remain relatively technical-debt free. We are excited to bring on more highly skilled software engineers to bring our software toolkit to the world of researchers and customers who want to use Duplex Sequencing the most.

At TwinStrand, you will become proficient in many skills beyond those that are absolutely required for the core role of Software Engineer because we encourage translational skill-building, diverse teams, and intense scientific collaboration. You are the ideal candidate if you have a creative mindset, proven abilities collaborating in a team environment, a great ability to produce low-defect software solutions, and a love for working within a high-performance group.
RESPONSIBILITIES

- Design, develop, and maintain databases that will underly our currently evolving Laboratory Information Management System (LIMS)
- Extract, transform, and load data from sequencing run analysis flat files (S3 objects) into relational databases using a Python API which you will design and build. Integrate object relational mappings (ORM) for the Computational Biology Team to enable routine longitudinal querying using a programmatic API.
- Build web applications at TwinStrand which enable scientists of varying technical expertise to search and explore previous outcomes from Duplex Sequencing assay development experiments.
- Engineer on-site applications and information systems to further automate and make efficient data access and query for the company as a whole.
- Work with our cloud stack (AWS) to further automate and expand integration testing of our genomics pipelines. Build real-time reporting dashboards for cloud processing outcomes.
- Understand the data outputs of our genomics processing pipelines and explore new ways for bringing novel insights to researchers, customers, and assay developers.
- Other duties as assigned.

EXPERIENCE AND CAPABILITIES

- Excellence in 2 or more of the following languages: Scala, Python, JavaScript, Java, Go, Rust.
- Strong ability in architecting database designs and understanding which tools are needed for which applications.
- Experience with API query language and RESTful APIs
- Excellent skill in documenting work completed as well as designing infrastructure as code to mitigate configuration drift.
- Ability to work well within a team, in a fast-paced environment.
- High competency with cloud (AWS specifically) development and deployment.
- High competency with version control systems like Git.
- Effective communication skills.

PHYSICAL AND TRAVEL REQUIREMENTS

- Prolonged periods sitting at a desk and working on a computer.
- Possible occasional travel to conferences

OUTSTANDING CANDIDATES WILL

- Have a M.Sc. or Ph.D. in computer science, engineering, or related field.
• Have experience in working with the output file types of genomics data pipelines (BAM, VCF, etc.)
• Have experience with serverless programming (AWS Lambda, etc.)
• Have experience with Amazon Web Services like Batch, EC2, and S3.
• Have experience with continuous integration and deployment.
• Have experience with DevOps best practices.
• Have experience with analytics and big data systems.
• Have biotechnology experience, startup company a bonus.
• Have familiarity with high-throughput sequencing libraries and short-read sequencing

WHAT WE OFFER
• A mission to be proud of. You will help to provide access to a technology with unprecedented sensitivity that makes it possible to solve previously unsolvable scientific problems in basic research and translational medicine, with direct and immediate benefits to human health.
• Beautiful new waterfront facility overlooking Puget Sound, centrally located in downtown Seattle.
• Competitive compensation plan.
• Comprehensive benefits: medical, dental and vision benefits for employees and dependents, sponsored life, short and long-term disability insurance, and 401(k) retirement savings plan.
• Subsidized transportation program: parking, bus, ferry, rideshare and more.
• Onsite gym, showers, bike storage.
• Social events, weekly happy hours, well-stocked kitchen.
• Recognition that outside life exists and is important, that flexibility is needed for family and that work can sometimes be effectively carried out remotely.
• Casual, but high-performing work environment.

Interested applicants should send a CV and a cover letter to careers@twinstrandbio.com
ABOUT TWINSTRAND BIOSCIENCES

We are a vibrant, young company committed to applying a powerful new genomic technology across disciplines to improve human health and accelerate scientific discovery. Our mission is to develop and deliver the unprecedented accuracy of Duplex Sequencing™ for applications in the life sciences and medicine where it can do the greatest good for the maximum number of people.

Our business is multifaceted and encompasses internal development projects, external collaborations, and empowering of our partner organizations and customers. Our mission is strongly rooted in academic principles of responsible citizenship within the broader scientific community, yet executed with the nimbleness of a startup, such that research can be rapidly translated into solutions that benefit the scientific and medical community. To the greatest extent possible, we strive for open sharing of knowledge and discovery through academic presentations and peer-reviewed publications.

At TwinStrand we put a premium on creativity, dynamic thinking and a rigorous scientific approach. You will be challenged to push the boundaries of your knowledge, skills and comfort zone and to take ownership of your area of expertise. We expect all team members to take on some form of leadership role over time and mentor new team members as we continue to expand. We want every member of our community to come to work excited each day and able to take pride in the high-quality science to improve human health that they are contributing to.

TwinStrand Biosciences is an equal opportunity employer. We celebrate diversity and are committed to creating an inclusive environment for all employees.