Douglas C. Wu

Bioinformatics Scientist/Engineer

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⊙ Professional summary

Highly-motivated fast learner with >9 years of bioinformatics consultation, engineer and research experiences. Collaborative and innovative with strong communication and interpersonal abilities. Staying up-to-date with industrial trends in sequencing and bioinformatics technologies. Comfortable with working in a fast-paced environment.

⚙ Skills

Bioinformatics Variant Calling, Multiplex PCR primer design, WGS-seq, Targeted DNA-seq, RNA-seq, 16S-seq, methyl-seq, experimental design, familiar with public *-omics databases and their APIs, such as UCSC and Ensembl

Coding Python, R, Bash, Rust, SQL, C/C++, Matlab

Computing Familiar with Amazon Web Service (AWS), High performance computing (SGE and SLURM), RESTful APIs, Snowflake, Docker/Singularity, GitHub Action, Jenkins, software engineering best practices

Deep learning framework Pytorch, JAX/STAX, Keras/Tensorflow

Experimental skills Cell-free DNA and RNA-seq, Methyl-seq, Molecular diagnostics, Live cell imaging

◔ Experience

Invitae
Bioinformatics Engineer/Scientist (L3)

January 2021 – Present
Rockville, MD

> Collaborated with R&D scientist to develop, optimize and validate novel experimental (*Illumina and Pacbio*) *and computational methods for high-throughput detection of germline mutations (SNV, InDels, repeat expansions) in "hard-to-do" genes*

> Validated and integrated R&D tools into production pipeline code base to expand sponsored testing programs to increase revenue by 80% per sample

> Developed RESTful endpoints to enable data streaming to dashboards for clinical geneticist data reviews and enable LIMS automation to support processing of >1,000 samples/month

> Established assay development process for integration testings across different production systems

> Developed R&D code to interact with different internal microservices to decrease turnover time in genomics experiments

> Performed code review to improve code qualities of production pipelines and led collaborative efforts to refactor internal python code base to warrant genetic testing accuracy

QIAGEN
Bioinformatics Scientist

July 2019 – Deceember 2020
Frederick, MD

> Provided bioinformatics consultation for thousands to million-dollar-sized projects from experimental design to result interpretation and reporting

> Expert in data visualization and progress/result reporting presentations for academic, pharmaceutical and biotech researcher customers, and internal stakeholders

> Worked with global product managers, sales teams, and field scientists to conduct internal training sections and establish genomics services cost calculations to provide more competitive service pricing

🎓 Education

University of Texas at Austin
Ph.D in Molecular Genetics specialized in Bioinformatics

2013 – 2019
Austin, TX

University of Illinois at Urbana Champaign
BS in Biochemistry

2009 – 2013
Champaign, IL