

# Darren Flores

## Senior Software Developer

✉ DarrenFlores275@hotmail.com 📍 Los Angeles County, California, United States

🔗 darrenf.vercel.app/  <https://www.linkedin.com/in/darren-flores-897067293>

🐙 <https://github.com/JobStar-success/>

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### SENIOR SOFTWARE DEVELOPER

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I'm a Senior Software Engineer with 10+ years of experience in full-stack development, cloud computing, and life sciences, specializing in genomics and AWS. At Biogen, I migrated 500TB of genomic data to AWS S3, built a React-based web app, and automated bioinformatics workflows with GitHub Actions. Previously, at UCSC Genomics Institute, I worked on large-scale projects like Dockstore and HuBMAP, handling massive omics datasets.

I'm passionate about learning new technologies, solving complex problems, and delivering scalable solutions that advance scientific discovery. Skilled in Terraform, AWS, React, Python, WDL, and CI/CD. Key skills: Problem solving, root cause analysis, communication, multitasking, and troubleshooting.

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### PROFESSIONAL EXPERIENCE

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#### Biogen | full-time

Senior Software developer | Full Stack & AI Development

11/2022 – 04/2025

Houston, Texas, United States

- Wrote software utilities to transfer half a petabyte of data from DNAnexus to AWS S3 to achieve the company goal of switching cloud providers.
- Led refactor of React based web front end so it would work with AWS Cloud infrastructure allowing scientists to submit workflows on AWS Omics.
- Migrated WDL workflows from BitBucket to GitHub and modified them to run on AWS Omics.
- Wrote GitHub Actions for workflows using modules to register them in AWS Omics.
- Designed, wrote and tested enhancements for NodeJS React web application front end, serverless javascript and Python backend with AWS RDS Postgres DB, which integrated with DNAnexus infrastructure, allowing scientists to more easily set up, run and monitor bioinformatics pipelines.
- Designed, wrote and tested AWS Lambdas in Python for processing data on AWS S3 and DNAnexus.
- Designed, wrote and tested AWS Step Functions to process Next Generation Sequencing (NGS) data to AWS S3 and extract metadata to an RDS Postgres DB, enabling use of AWS services and streamlining infrastructure.

- Designed, coded, and debugged Terraform, GitHub Actions and AWS CodeBuild deployment of AWS Lambdas and ECR Docker containers for transfer and processing of bioinformatics data, simplifying software deployment.
- Debugged and enhanced WDL bioinformatics pipelines and debugged runs on DNAnexus enabling scientists to accomplish research goals.
- Designed, wrote and tested enhancements for Linux service in Python that uploaded Illumina and PacBio NGS data to AWS S3, and ran pipelines on DNAnexus to transform it to FASTQ and BAM, enabling secondary processing.
- Wrote system documentation on Wiki and workflow GitHub pages to inform scientists on proper usage of workflows.

### **UCSC Genomics Institute | full-time**

*Senior Software Engineer*

03/2018 – 10/2022

Fremont, California,  
United States Remote

- Designed, coded, and tested software used in Dockstore and Computational Genomics Platform.
- Wrote genomics workflows for TopMed and HuBMAP data using Docker, CWL, WDL, Python, and R.
- Designed, coded and tested scATAC-seq pipeline in CWL using ArchR package.
- Interfaced with Terra, DNANexus, DNASTack, Illumina, and Toil computational biology infrastructures.
- Developed web infrastructure for Dockstore using shell scripts, CircleCI, PostgreSQL, Maven, Java, AWS EC2, S3, CloudFront, CloudFormation, Alarms, Lambda, Docker-compose, Linux, Github, and dockerHub.
- Built alarm and Slack notification using AWS Alarms, SNS, Lambda, and Slack.
- Participated in project processes using Agile methods such as scrum, sprint, sprint review, and backlog refinement.
- Utilized Jira for ticket management, Wiki for documentation, and Slack for team communication.
- Experience working with large-scale omics datasets, e.g. TopMed, 1000 Genomes, TCGA.
- Experience running computationally expensive and long running genomics pipelines.
- Worked on FedRAMP compliance for Dockstore website by implementing software controls and writing documentation for the System Security Plan (SSP).

### **StarTechPC.com**

*Technical Architect*

03/2015 – 11/2017

Austin, Texas, United  
States

- Data Center Group - Health and Life Sciences
- Part of a multi-disciplinary team developing software and system solutions for health and life sciences. Responsible for designing, developing, and testing software frameworks used to execute Genomics workloads. Also responsible for implementing parallel processing, FPGA offload and other optimization techniques to speed up genomics pipelines.

- Responsible for building Omics pipeline software for a distributed and federated solution for bioinformatics and biomedical informatics data analysis
- Created genomics pipelines for DNA preprocessing and somatic variant calling using tools such as BWA, Picard, SAMtools, and GATK using languages such as Python, C, XML and Git
- Created Docker files and build scripts for bioinformatics tools used in pipelines
- Utilized the Galaxy IDE and also the Broad's Workflow Definition Language (WDL) for constructing
- bioinformatics pipelines
- Profiled bioinformatics tools for performance and optimized genomic pipelines by applying parallelization
- techniques such as scatter-gather within workflow IDE and workflow definition languages
- Collaborated with interdisciplinary teams of business, user-experience and domain experts, and external
- industry partners
- Implemented translated search for HMMER using Intel C/C++ compiler and offload of routines using OpenMP
- Bioinformatics courses at UCSC including Computational Biology Tools, Bioinformatics Models and Algorithms, and Computational Genomics

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## SKILLS

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### React.js

Next.js

### Vue.js

Nuxt.js

### Tailwind CSS

Material UI

### JavaScript

TypeScript

### Node.js

Nest.js

### Python

Django

### PHP

FastAPI

### PostgreSQL

MySQL

### MongoDB

OpenAI API

### LangChain

TensorFlow

### PyTorch

n8n

### Make

Zaiper

### C#

NET

### Angular

PostgreSQL

### Oracle

Cloud Services

### AWS

LLMs

### Automated Workflows

RAG pipelines

### Docker

Git

### DevOps

GoLang

### Swift

React Native

### Flutter

Kotlin

### FlutterFlow

IOT

### AI Chatbot

Machine Learning

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## PORTFOLIO/GITHUB LANGUAGES

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English



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## EDUCATION

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<b>Woodbury University</b>	08/2011 – 03/2014
<i>Master's degree, Computer science</i>	Houston, Texas, US
<b>Woodbury University</b>	08/2007 – 03/2011
<i>Bachelor's degree, Computer science</i>	Houston, Texas, US