Jessica Parks

Data Scientist

Data Scientist with experience in genomics, data management, ETL, and data visualization. I've been developing in the AWS cloud ecosystem for 2 years and programming in Python for over 5 years. I use this expertise to engineer data platforms and provide reproducible insights from complex data.

Experience

DATA SCIENTIST 2015–present

AgBiome

- I led several development cycles to modernize our pesticidal protein discovery platform, and provide data and guidance for prioritization of the resulting proteins in lab assays.
- I am leading the effort to collect all lab assay data in our AWS platform, ensuring data robustness and enabling analyses.
- I engineer multiple aspects of our AWS data platform, using CloudFormation, ECR, S3, Batch, Glue, Lambda, Athena, Step Functions, etc.
- I develop dashboards using both Plotly Dash and AWS Quicksight to provide data and analyses to scientific and IP teams. I have delivered multiple products that enable data discovery and on-demand analysis.

GRADUATE RESEARCH ASSISTANT 2020

North Carolina State University

- I compiled a data set from 20+ Ribo-seq projects and built a pipeline to process this sequencing data on a Slurm HPC cluster using Singularity containers and Snakemake. This allows the group to perform analyses across their Ribo-seq data and the data generated from other labs.

STUDENT CONSULTANT 2020

North Carolina State University

- I used Conda, Python, and R to co-create a workflow for a client to process DNA metabarcoding data on a LSF HPC cluster, replacing their previous time-intensive manual workflow.

RESEARCH ASSOCIATE 2013–2015

AgBiome

- I performed microbial isolation, stocking, and growth for pest assays; I led an experiment that resulted in the addition of a selective isolation strategy that has been used for about half of AgBiome's 80,000+ microbe collection.
- I identified candidate pesticidal proteins from microbial genomes using CLC Genomics Workbench, and developed a Python workflow to prepare the resulting data for patent filing. This protein collection resulted in multiple research partnership deals with other biotech companies.
- I led the project planning, user testing, and coordination with a software partner for development of a Postgres database and Ruby-on-Rails application. This was a multi-year project with a budget ranging up to $1M per year, and resulting in a product used across the company for over 7 years.

UNDERGRADUATE RESEARCH ASSISTANT 2011–2012

University of North Carolina at Chapel Hill

- Awarded UNC-HHMI Future Scientists and Clinicians Fellowship for two summers.
- I performed a forward genetic screen to isolate multiple chemically-induced mutations in C. elegans, and used SNP mapping and WGS to identify the mutants.

updated on: Mon Jun 07 2021

Education

MASTERS

BIOINFORMATICS

North Carolina State University

2019–2020

BACHELOR OF SCIENCE

CHEMISTRY AND BIOLOGY

University of North Carolina at Chapel Hill

2009–2013

Certifications

AWS Developer – Associate

AWS Cloud Practitioner

Coursera ML Specialization (in progress)

Technical Skills

AWS **Bash** **Docker** **Git/GitHub** **Julia** **Jupyter** **Linux** **Plotly/Dash** **Python** **R** **Slack** **SQL** **Trello**

Links

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