Daniel Jon Peterson

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Skills

General: Data analysis pipelines, Image processing at scale, Data ethics, Agile, Scientific scholarship

Programming languages: bash, R, python, java, MATLAB, Mathematica, Terraform

Other systems and tools: AWS (S3, EC2, Batch, IAM, ECR/ECS), Docker, git, Jupyter

Experience

Data Engineer Octave Bioscience Mar 2022-Jan 2024

- Developed and deployed a production pipeline for biomedical image processing that generates FDA-compliant clinical MRI reports for multiple sclerosis research and patient care.
- Built interest in our platform by authoring scientific conference posters and journal articles.
- Managed collaboration with contractors on various projects, resulting in a public-facing iOS app, custom image annotation software, and a patent application.
- Utilized software engineering best practices including unit and integration tests, CI/CD pipelines, code reviews for merge requests, and tiered deployment environments.

Data Engineering Fellow

Insight Data Science

Sep 2019-Sep 2020

- Developed a webservice to make it easy for people to get 3D prints of their brain from an MRI.
- Scaled-up and productionized a computationally intensive image processing pipeline, run on AWS Batch, deployed with Terraform, and with a frontend made with Flask (python).
- Served public users, and conducted a successful stress-test of many concurrent simulated users.

Research Engineer III

University of Washington

Apr 2015-Mar 2022

- Created and maintained a variety of data processing pipelines for medical images, and executed them on a high-performance computing cluster.
- Took a lead role in modernizing research group practices to use AWS, github, python and R.
- Worked directly with research subjects and clinical trial participants from challenging populations, such as patients with epilepsy, people with advanced dementia, and people currently in hospice care.
- Extracted biological meaning from diverse data sets using advanced statistics, graph theory, and machine learning techniques, resulting in multiple scientific publications (h-index: 12).

Education

BA in Chemistry

Lewis & Clark College, Portland, OR

May 2006