

Kevin Sayers

Denver, CO

sayerskt@gmail.com

+1 301 331 0305

Background in Bioinformatics and research computing in both HPC and Cloud. Extensive experience with Workflow Management Systems.

Willing to relocate: Anywhere

Work Experience

Research Scientist

Amazon-Denver, CO

May 2022 to Present

- Member of Professional Services Advanced Computing team focused on HPC and HTC workloads
- Leverage expertise with AWS Batch and ParallelCluster to deploy customer workflows.
- Primarily support customer's bioinformatics workflows defined in common workflow languages such as Nextflow and Snakemake.
- Migration of on-prem HPC workloads to AWS services.
- Gather and prioritize customer requirements.
- Present workshops for HPC customers demonstrating AWS solutions.
- Key skills: HPC, Slurm, ParallelCluster, AWS Batch, Kubernetes, containers, CDK, Nextflow, Snakemake, Amazon HealthOmics

Researcher III - Computational Science

National Renewable Energy Laboratory-Golden, CO

January 2020 to April 2022

- HPC User and Applications Support team on a Top500 HPC system.
- Facilitate scientific workflow execution on the HPC system through understanding user's requirements and implementing POCs.
- Contributing to a cross-functional HPC/Cloud project to understand and develop recommendations for utilization of NREL's computational resources.
- Participating in benchmarking and requirement specification for a new HPC system anticipated to be in the Top500.
- Developed a Dask based machine learning workflow which enabled scalable analysis of buildstock energy consumption.
- Key skills: HPC, Dask, containers, HPC benchmarking

Workflow Developer

SIB Swiss Institute for Bioinformatics-Basel, BS

November 2017 to November 2019

- Acted as a workflow subject matter expert for the Swiss Personalized Health Network
- Managed a 5 person working group tasked with developing interoperable workflow infrastructure for the Swiss Personalized Health Network (SPHN).
- Worked with nationwide multidisciplinary stakeholders from HPC IT to medical doctors to gather requirements and shape consensus.

- Coordinated the ELIXIR Switzerland node application and contributions to the “Compatible Cloud” implementation study for federated workflow execution.
- Acted as a Swiss GA4GH Driver Project champion and developed implementation strategies for the SPHN.
- Utilized Scrum, Jira, Confluence, and other project management tools to facilitate the execution of the SPHN BioMedIT project.
- Key skills: Nextflow, containers, Slurm, Kubernetes, CWL

Graduate Intern

Centre for Genomic Regulation, Comparative Bioinformatics Group-Barcelona, Barcelona provincia
March 2017 to August 2017

- Developed a proof of concept Common Workflow Language to Nextflow converter in Groovy.
- Created additional pipelines for testing converter including common NGS pipelines.
- Built Docker containers to be utilized as part of Nextflow workflows.
- Investigated the integration of GPU enabled containers into Nextflow workflows.
- Deployed pipelines to cloud and HPC environments.
- Key skills: Nextflow, CWL, containers, Slurm, Groovy

R&D Research Associate

Biodesix, Inc
December 2012 to August 2016

- Worked in an interdisciplinary role collaborating with software engineers, scientists, and data analysts.
- Developed Python and C# programs to automate data handling tasks.
- Developed database tools for the tracking of instrument and experimental parameters.
- Used Python's matplotlib and bokeh modules to develop data visualization tools.
- Assisted with processing and analysis of MALDI spectra. Including through the submission of jobs to an HPC cluster.
- Participated in MALDI-TOF MS experimental design.

Education

MSc in Bioinformatics

Universitat Autònoma de Barcelona - Barcelona, Spain
September 2016 to 2017

B.S. in Biochemistry and Molecular Biology

University of Maryland Baltimore County (UMBC) - Baltimore, MD
2012

Skills

- Git
- AWS
- Python
- Nextflow
- Bioinformatics
- HPC

- Docker
- Slurm
- ParallelCluster
- CDK
- Kubernetes
- AWS Batch

Links

<https://github.com/KevinSayers>

<https://twitter.com/KevinTSayers>

Certifications and Licenses

Certified ScrumMaster (CSM)

September 2018 to September 2020

AWS Certified Solutions Architect - Associate

June 2022 to June 2025

AWS Certified Developer - Associate

August 2023 to August 2025

AWS Certified Security - Specialty

February 2024 to February 2027

Patents

Predictive test for melanoma patient benefit from antibody drug blocking ligand activation of the T-cell programmed cell death 1 (PD-1) checkpoint protein and classifier development methods (#10007766)

Publications

Increased secretory leukocyte protease inhibitor (SLPI) production by highly metastatic mouse breast cancer cells

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0104223>

August 2014

High-resolution hourly surrogate modeling framework for physics-based large-scale building stock modeling

<https://www.sciencedirect.com/science/article/pii/S2210670721005680>

December 2021