

Sarah Allec

Highly motivated data-centric research scientist with experience in **data management**, **artificial intelligence**, and **high-performance computing**. Has research and course experience in **C++**, **Python**, and **bash** programming languages, as well as a variety of **Python-based machine learning libraries** and **SQL database management**. Passionate about collaborative and interdisciplinary data-driven decision-making.



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Boise, ID, United States



sarah-allec.github.io/



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github.com/sarah-allec

SKILLS

Coding: Python, C++, bash scripting

Machine learning: scikit-learn, pytorch, gflow

Data: SQL, JSON

UI: Streamlit

OS: Windows, MacOS, Linux

OUTREACH

Community Volunteer Interfaith Sanctuary

2023 - Present

Boise, ID

Greet and check in guests, support shelter operations, data management

Workshop Leader Citrine Informatics

2023

San Luis Obispo, CA

Led a workshop for educators at the North American Materials Education Symposium

WORK EXPERIENCE

Research Scientist II Citrine Informatics

10/2022 - Present

Remote

Citrine Informatics is the world leader in generative AI for materials and chemicals product development.

Tasks

- ▣ **Perform cutting-edge research** in the application of machine learning to materials design.
- ▣ **Manage** technical aspects of funded projects.
- ▣ **Collaborate** with researchers at universities, national labs, and other companies.

Contact : James E. Saal - jsaal@citrine.io

Postdoctoral Research Associate Pacific Northwest National Laboratory

09/2020 - 09/2022

Richland, WA

PNNL is a leading center for scientific discovery in chemistry, data analytics, Earth science, sustainable energy, and national security.

Tasks

- ▣ Performed research on the computational design of carbon capture solvents and catalysts via **atomistic modeling, high-throughput computing, and data science**.
- ▣ **Collaborated with team members** in multidisciplinary research groups.
- ▣ **Published peer-reviewed journal articles** concerning research findings.

Contact : Marat Valiev - marat.valiev@pnnl.gov

EDUCATION

PhD, Materials Science & Engineering University of California Riverside

09/2015 - 09/2020

3.97 GPA

BS, Applied Mathematics University of California Riverside

09/2011 - 06/2015

3.97 GPA

RELEVANT PUBLICATIONS

Invited manuscript

Evaluation of GlassNet for physics-informed machine learning of glass stability and glass-forming ability

Author(s)

Sarah I. Allec, Xiaonan Lu, Daniel R. Cassar, Xuan T. Nguyen, Vinay I. Hegde, et al.

2024, Submitted to the Journal of the American Ceramic Society

A pre-print is available on arXiv: <https://doi.org/10.48550/arXiv.2403.10682>

Research article

A case study of multimodal, multi-institutional data management for the combinatorial materials science community

Author(s)

Sarah I. Allec, Eric S. Muckley, Nathan S. Johnson, Christopher K. H. Borg, Dylan J. Kirsch, et al.

2024, Integrating Materials and Manufacturing Innovation

<https://doi.org/10.1007/s40192-024-00345-7>