Dylan Suvlu

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Professional Summary

Computational scientist with 10+ years experience combining statistical physics, high-performance computing, and modern machine-learning to turn complex scientific data into actionable insights. Expert at building GPU-accelerated simulations, Bayesian models, and cloud-native data pipelines. Recognized for cross-functional collaboration, mentoring, and peer-reviewed publications that push the state-of-the-art in data-driven research.

Core Skills

Languages	ML/DS Frameworks	DevOps/Cloud	HPC	Domain Toolkits
Python, Julia, C++, Fortran	scikit-learn, PyTorch, TensorFlow, XGBoost, PyMC	AWS (S3, Batch), Docker, Git	CUDA, OpenMP, MPI, SLURM	OpenMM, Gromacs, LAMMPS, RDKit

Experience

Postdoctoral Associate Sep 2020 – Present
Massachusetts Institute of Technology Cambridge, MA

- Designed and implemented GPU-accelerated Bayesian inference models that revealed previously undetected patterns in single-atom interfacial electric-field data.
- Built end-to-end GPU-accelerated simulations and analytics pipelines that cut compute time 10x for a variety of condensed phase systems including coarse-grained polymers, polarizable nanoparticles, and interfacial electric field systems.
- Recognized by the chemistry department for mentoring graduate and undergraduate students in research.

Graduate Student Researcher Sep 2014 – Aug 2020
University of Maine Orono, ME

Education

Ph.D. Chemistry 2014 – 2020
University of Maine Orono, ME

B.S. Chemistry 2010
University of Maine Orono, ME

Selected Publications

3. J. Nauman, **D. Suvlu**, and A. Willard, "Electric Fields at Solid-Liquid Interfaces: Insights from Molecular Dynamics Simulation," *Annu. Rev. Phys. Chem*, vol. 76, pp. 1–22, 2025, doi: 10.26434/chemrxiv-2024-kcx5x.

2. A. Limaye*, **D. Suvlu***, and A. Willard, "Water molecules mute the dependence of the double-layer potential profile on ionic strength," *Faraday Discuss.*, 2023, doi: 10.1039/D3FD00114H.

1. H. Nguyen *et al.*, "Bottlebrush Polymers with Discrete Sidechains Display Stereochemistry- and Conformation-Dependent Biological Properties.," *Nat. Chem.*, vol. 14, no. , pp. 85–93, 2022, doi: 10.1038/s41557-021-00826-8.

*Co-first author

Honors and Awards

NSF Postdoctoral Research Fellowship in Biology Sep 2022 – Aug 2024

Burroughs Wellcome Fund Postdoctoral Enrichment Program Sep 2021 – Sep 2024

Mentorship Spotlight Award 2022

Sequoyah Fellow 2016

Certificates

Machine Learning Specialization through Coursera ML 2024