

Lance A. Bettinson

bettinsonlance at gmail dot com // 801 834 2116 // SF Bay Area

EXPERIENCE

Bayer Sept. 2022 – present
Data Scientist – Engineering & A.I. SF Bay Area, CA & Boston, MA

- Develop generative AI/ML models to simulate bio- economic indicators from genomics, climate, & imagery data.
- Quantify predictive uncertainty & risk using the latest methods in probabilistic deep learning, including variational Bayesian inference & Markov chain Monte Carlo.
- Continually improve digital twin models leveraging state-of-the-art model architectures.
- Deliver reports to stakeholders on performance forecasts for products in the discovery pipeline.
- L.I.F.E. Awards Finalist (2023) for demonstrated leadership, integrity, flexibility, & efficiency

Berkeley Lab & Q-Chem Oct. 2016 – May 2022
Graduate Researcher – Quantum & Statistical Mechanics Berkeley, CA

- Innovated original statistical & generative models for quantum physics simulations.
- Specialized in multivariate complex statistics, quantum mechanics, machine learning, & uncertainty quantification.
- Utilized high performance supercomputing resources at the National Laboratory.
- Heinz Heinemann Prize (2020) for excellence in graduate research

University of California, Berkeley Aug. 2017 – May 2019
Graduate Student Instructor Berkeley, CA

- Taught Computational Methods & Process Analysis to over 200 engineering undergraduates.
- Outstanding Graduate Student Instructor Award (2018)

Stanford University Dept. of Medicine Oct. 2013 – June 2016
Student Researcher Stanford, CA

- Conducted independent breast cancer research with external funding.
- Stanford Bio-X Undergraduate Fellowship (2014) & U.A.R. Major Research Grant (2014)

EDUCATION

University of California, Berkeley Aug. 2016 – May 2022
Ph.D. Chemical and Biomolecular Engineering Berkeley, CA

- Chevron Fellowship (2019-2021)
- Chancellor's Fellowship (2016-2018)
- Honorable Mention, N.S.F. Graduate Research Fellowship (2016)

Stanford University Sept. 2012 – June 2016
B.S. Chemical Engineering Stanford, CA

- Henry Newell Scholarship (2014)
- Alliant Techsystems and Magna Chamber of Commerce Scholarship (2012)

SKILLSET & INTERESTS

- **AI/ML Tools:** Python, PyTorch, Tensorflow Probability, Pyro, PyMC, ArviZ, Lightning AI, sklearn, NumPy, SciPy, pandas, Matplotlib
- **Methods:** Markov chain Monte Carlo, Hamiltonian Monte Carlo, variational Bayesian methods, generative models, multimodal models, multi-task learning, attention methods, recurrent NNs
- **Interests:** Cycling, weightlifting, fitness, chess, current events, politics