Cutter Dawes

cutter@dawes.org linkedin.com/in/cutterdawes

Education

2019 – 2024 **B.A., Mathematics, Princeton University**.
GPA 3.78. Member of Sigma Xi Honor Society.
Thesis: *Adding with Alternative Carries: An Investigation of the Inductive Biases of Artificial Neural Networks*

Employment History

Fall 2024 **Research Intern,** Max Planck Institute for Biological Intelligence.
Researched local learning in neural networks inspired by the brain, including Hebbian rules (and variations with competing neurons) and spike-timing dependent plasticity; ran experiments investigating performance on simple image-recognition tasks such as MNIST

2020 – 2023 **Research Intern,** NeuraLens, Lawrence Berkeley National Laboratory.
Conducted an algorithmic search for gravitationally lensed quasars in the DESI Legacy Surveys; lead author of paper (published in the Astrophysical Journal Supplement Series; DOI 10.3847/1538-4365/ad015a) presenting results of search, including the novel discovery of 436 lens candidates and follow-up spectroscopic observations

Summer 2023 **Data Science Intern** Stovell AI Systems.
Exploratory data analysis of energy company pricing data in Python; built pipeline to predict and analyze the pricing strategies of clients' competitors

Summer 2022 **CompBio Intern** ArsenalBio.
Created a dashboard to help choose which tumor cell membrane receptors to target in programmable cell therapy cancer treatment

Summer 2018 **Research Intern** Stanford University.
Created a feedback loop for the experiment's Magneto-Optical Trap using a field programmable gate array; used Google's image recognition software to analyze the lab's data (images of Rubidium clouds)

Skills

Coding & ML Python (inc. PyTorch, scipy, numpy, etc.), Java, SQL, LaTeX, …

Math Probability, group theory, game theory, multivariable calculus, linear algebra, proofs

Languages Strong reading, writing and speaking competencies for English, Spanish.

Misc. Academic research, LaTeX typesetting and publishing.

Awards and Achievements

2024 **Dr. Robert J. Glushko Independent Research Prize in The Program in Cognitive Science**, Princeton University.

Sigma Xi Book Award for Outstanding Research, Princeton University.

2019 **Youth Volunteer of the Year**, Heart of Marin Awards