Jeremy Millford

Austin, Texas 78745 | 830-832-1452 | Jeremy_millford@berkeley.edu | Jeremymillford@gmail.com
https://www.linkedin.com/in/jeremy-millford-032a15ab/ | https://github.com/jeremymillford

EDUCATION:

University of California, Berkeley – Master of Molecular Science and Software Engineering GPA (3.927)
University of Texas Health Science Center Houston - 6 credits toward MS Biomedical Informatics GPA (3.5)
Texas State University – Bachelor of Science in Biology, Minor in Chemistry GPA (3.21)

Coding Experience: C++, C, Python, Pytorch, R, RDkit, scikit-learn, Pandas, CUDA, SQL, Matplotlib, Computer Vision, Natural Language Processing, Data Science, Data Cleaning and EDA, Regex, Machine Learning Algorithms, LLMs, Data Visualization, PCR, Clustering, and Graph Neural Networks.

Relevant Projects:

- Neural Networks for predicting Atom Typing of Drug-Like Molecules to determine bonding
- Neural Networks for Predicting Gene Sequence Regenerative Associations
- Computer Vision to Classify Natural Disaster Damage Type and Severity (Data Science)
- National Energy Research Scientific Computing Center Supercomputer Parallel Computing with MPI, OpenMP, and CUDA. (One example was parallelizing a full genome alignment)
- Drug Discovery for Malaria Treatments
- Quantum Chemistry Molecular Simulations for CNDO, Hartree-Fock, etc.
- Building Neural Networks and Transformers from scratch in Python standard library
- Analysis of Alzheimer's related genes, clinical relations, gene networks, and proteomics

Professional Experience:

Company: BIOVIA (Scientific Software) | January 2025 – June 2025
Position: Machine Learning Intern

- Developed an extremely high performing MPNN model to predict atom typing for use in atomic bonding and docking of drugs with proteins.
- Managed a full team of developers that delivered a usable, robust, finished product on time.
- Utilized Github tasks, issues, actions, and project planning tool as scrum leader.

Company: Jumpcode Genomics (CRISPR based Start-up) |March 2022 – March 2023
Position: Account Manager for Central US

- Advised top scientists and on CRISPR assisted sequencing and technology.
- Collaborated on sequencing and Bioinformatic data processing.

Company: Grifols Pharmaceuticals (Biomat USA) |February 2019 – February 2022
Position: Associate Technical Scientist-Technology, Validation, and Investigation lab

- Designed and executed national scale implementations and validations of new immunoassays, testing platforms, and laboratory equipment for the two largest plasma labs in America.
- Extensive experience working with abnormally high titer category B infectious material including HIV, HAV, HBV, HCV, Parvovirus B19, COVID19, and World Health Organization standards.
- Experience operating, implementing, programing, and writing SOPs for most laboratory Equipment.
- Designed an antibody based therapeutic pharmaceutical product for manufacturing and validated finished product lines.

Texas State University | Dr. Garcia Lab| August 2016 - December 2018
Undergraduate Research Assistant-(Nervous system/regeneration lab)

- Designed and conducted IHC experiments to determine presence of melatonin receptors and beta amyloid cysts in Zebrafish and Mouse retina and brain tissue.
- Worked with confocal and electron microscopes.
- Cared for, sacrificed, and bred laboratory animals.
- Wrote for grant funding.