

Spencer Uyematsu

Redmond, WA · (425) 209-7952 · suyematsu@outlook.com · [LinkedIn](#) · [GitHub](#)

EDUCATION

University of California, Berkeley, CA | May 2024

Master of Molecular Science and Software Engineering | GPA: 3.98

Pomona College, Claremont, CA | May 2023

Bachelor of Arts: Molecular Biology | GPA: 3.87 | Varsity Baseball

EXPERIENCE

Proteios Technology, Seattle, WA

Bioinformatics Scientist I – Contractor | May 2024-Present

Bioinformatics Intern | Jun 2023-May 2024

Proteios is a startup in the Biotech industry focused on using aptamers for protein and cellular isolation.

- Engineered Python pipelines for high-throughput sequencing data analysis, processing over 500 million aptamer DNA sequences from SELEX experiments
- Developed novel k-mer based clustering algorithms using Python to identify structural similarities between aptamer candidates, facilitating the identification of promising candidates based on primary and secondary structure analysis
- Spearheaded computational analyses for an interdisciplinary team, leading computational workflows for four PhD scientists, and maintaining a centralized repository for data record-keeping, documentation, and analysis

Seption Technologies & UC Berkeley, Alameda, CA

Graduate Capstone | Jan 2024-May 2024

Title: Cell Failure Mode: Detecting Failure Mechanisms in Lithium Metal Batteries

- Automated identification of cell failure mechanisms in lithium metal battery testing using a Python-based time series anomaly detection machine learning model deployed on AWS Redshift and EC2
- Engineered a well-documented Python package and a custom web application using Shiny for Python, enhancing user accessibility and interaction with the anomaly detection program
- Replaced engineer-driven manual analysis, increasing classification accuracy to 97% and processing efficiency to ~50,000 data points/second

Pomona College Department of Molecular Biology, Claremont, CA

Undergraduate Senior Thesis | Sep 2022-May 2023

Title: Quantifying Cellular Differentiation: The Role of Ascl1 and Neurog2 in Neurogenesis

- Developed a Python-based mathematical model to quantify and simulate critical components of gene regulatory networks and associated pathways governing cellular differentiation in neural stem cells
- Presented research findings to faculty members and peers within the molecular biology department

City of Hope, Duarte, CA

Stem Cell Biology Research Intern | Sep 2022-May 2023

City of Hope is a research center and hospital that specializes in cancer care.

- Led a precision medicine project to identify patient-specific therapeutic candidates for brain tumors
- Compiled and analyzed mutational information, molecular profiling, and drug screening data for patient tumor samples and neurosphere cell lines using R

InBios International, Inc. Seattle, WA

R&D to Manufacturing Transfer Intern | Jun 2022-Aug 2022

InBios is a Biotech company focused on providing diagnostic tests for health outcomes.

- Organized data and experiments to ensure the sensitivity, specificity, and limit of detection of the Covid-19 rapid antigen home-based test production
- Played a key role in characterizing a new blocker for gold nanoparticle which is more cost-effective and efficient in minimizing non-specific interactions

SKILLS

Python (PyTorch, Sklearn, Pandas, NumPy), C/C++, SQL, Parallel Computing (OpenMP, MPI, CUDA), Linux/Unix, Version Control (Git, GitHub)