

# Aaron Lane

Bioinformatician

✉ aaronlane412@gmail.com

in [www.linkedin.com/in/aaron-matthew-lane](https://www.linkedin.com/in/aaron-matthew-lane)

☎ (707) 592-4197

Bioinformatician based in San Diego, completing a Master's in Biological Data Science with professional research experience at La Jolla Institute for Immunology. Skilled in programming, statistical analysis, and predictive modeling with expertise in computational biology, immunology, and data science. Now transitioning from academia into industry to apply bioinformatics to real-world biotechnology and pharmaceutical challenges.

## Projects

### Longitudinal Flu Vaccine Response Dynamics - *First Author, published in Vaccine (2025)*

- Analyzed data from ~1500 individuals across 12 influenza vaccine studies to identify distinct immune response phenotypes.
- Predicted long-term response trajectories with error comparable to assay noise, enabling early classification of responder phenotypes.
- Led analysis, figure and table creation, and communication of findings through peer-reviewed publication and seminar presentations.

### Heat Behind Bars - *Independent Project*

- Integrated spatial climate and facility infrastructure data to quantify heat risk in Arizona prisons.
- Modeled risk of mortality attributable to heat exposure across Arizona carceral facilities.
- Co-authored a manuscript with collaborators at Arizona State University.

### Notebook Comment Translator - *Open Source Tool, GitHub*

- Developed a Python tool that translates notebook markdown and comments between English and Spanish.
- Designed a modular pipeline to support multilingual science education and collaboration.
- Actively iterating on features and deployment.

## Skills

**Programming:** Python, R, SQL, Git/GitHub, Jupyter, Bash

**Data Science & Bioinformatics:** Data visualization, Statistical analysis, Predictive modeling, Machine learning, Data aggregation, Data pipeline development

**Communication:** Scientific writing, Effective presentations, Cross-functional collaboration, Bilingual - Spanish (level C1)

## Professional Experience

### Bioinformatics Specialist I (5/2024 - 8/2025)

La Jolla Institute for Immunology, San Diego

- Analyzed influenza serology data to build predictive models of the vaccine response.
- Published and presented findings to a multidisciplinary audience.
- Built tools to standardize serology data.
- Collaborated with global research teams to share and analyze data.

### Chemistry Teacher (8/2022 - 6/2023)

Vacaville High School, CA

- Instructed students in chemistry labs as well as data analysis using Excel.
- Prepared, delivered, and graded instructional materials.
- Communicated frequently with parents, students, and faculty to support students.

### ESL Science Teacher (8/2021 - 5/2022)

Oakland Unified School District, CA

- Utilized Spanish language skills to communicate with recent immigrant students and guardians regarding academic progress.
- Adapted biology lessons to support English learners with severely-limited schooling.
- Coordinated with EMTs to certify ~30 students in CPR and first aid training.

### Data Entry Intern (2/2016 - 2/2017)

Santa Barbara Coastal Long-Term Ecological Research

- Used Excel to enter data from various ongoing field surveys of the offshore kelp forest, including carbon-nitrogen content of organic matter, wildlife transects, and substrate transects.
- Ensured that data was recorded correctly and organized efficiently in shared files.

## Education

### MS, Biological Data Science (To graduate 12/2025)

Arizona State University, GPA: 4.0

### BS, Biological Sciences (6/2019)

University of California, Santa Barbara, GPA: 3.14

### MA, Bilingual Education (3/2022)

University of California, Davis, GPA: 3.9