

# Will Bodeau

Los Angeles, CA | (661) 714-0053 | [willbodeau@gmail.com](mailto:willbodeau@gmail.com) | LinkedIn: [www.linkedin.com/in/willbodeau](https://www.linkedin.com/in/willbodeau)

## PROFILE

Statistics and Data Science student with research experience in bioinformatics and environmental engineering. Skilled in programming, data analysis, and machine learning for data-driven solutions.

## EDUCATION

**University of California, Los Angeles**

**September 2022 – December 2025 (Expected)**

*B.S. Statistics and Data Science, Minor in Atmospheric and Oceanic Sciences*

**GPA: 3.61**

- Relevant Courses: Advanced Programming in R, Statistical Learning, Probability, Data Analysis and Regression, Statistical Models and Data Mining, Computational Statistics, Text Mining, Statistical Consulting
- Graduate Coursework: Machine Learning, Statistical Climatology

## EXPERIENCE

### Data Analyst Intern

**NASA Jet Propulsion Laboratory (JPL)**

**June 2025 – August 2025**

- Analyzed coastal observation and satellite altimetry data to assess sea level rise trends along the U.S. West Coast.
- Developed and optimized Python scripts to access, clean, and integrate datasets from multiple observational programs.
- Modeled temporal variability patterns and their correlation with coastal circulation and wave dynamics.
- Collaborated with scientists to improve data-driven insights for coastal adaptation and planning strategies.

### Bioinformatics Research Assistant

**UCLA Center for Statistical Research in Computational Biology**

**November 2024 – June 2025**

- Conducted research in the Junction for Statistics and Biology lab, evaluating computational methods for classifying cell types using single-cell RNA sequencing (scRNA-seq) data.
- Evaluated parameter choices for the Seurat pipeline in R to assess how algorithmic tuning affects classification accuracy.
- Applied ANOVA, hypothesis testing, and statistical tests to evaluate models.

### Environmental Engineering Researcher

**UCLA Department of Civil and Environmental Engineering**

**September 2023 – February 2025**

- Led a team at UCLA's Jay Lab testing *E. coli* for multi-drug resistance and managing time-sensitive operations.
- Identified a strong correlation (R-squared of 85%) between ampicillin resistance and MDR prevalence, highlighting limitations in WHO's environmental monitoring protocol.
- Presented findings at the UCLA Undergraduate Interdisciplinary Research Association.
- Co-authored manuscript on multidrug resistance in *E. coli* (under review in *Environmental Microbiology Reports*).

## PROJECTS

### Energy Production Optimization

- Developed an ensemble machine learning model using Scikit-Learn in Python to predict power plant electrical output based on ambient conditions, achieving an  $R^2$  of 95.5% and RMSE of 3.62. Optimized energy production to deliver economic and environmental benefits, outperforming published models by incorporating a Lasso meta-learner.

### Flight Delay Analysis using SQL

- Aggregated, cleaned, and imputed data from the Federal Aviation Administration and Department of Transportation to build a unique dataset encompassing three million flights and 21 variables, enabling exploratory analysis and modeling of airline delay causes.

### American Statistical Association DataFest 2024

- Collaborated with a team of six to provide actionable insights for improving the student experience on CourseKata based on data-driven solutions. Identified student engagement trends and platform bottlenecks, offering tailored recommendations that enhanced CourseKata's learning experience.

## SKILLS

**Programming:** R, Python, SQL, C, C++, Javascript

**Data Analysis & Visualization:** Tableau, Pandas, NumPy, Tidyverse, Ggplot2, Matplotlib, Seaborn

**Machine Learning Frameworks:** Scikit-Learn, TensorFlow, PyTorch, XGBoost

**Tools and Platforms:** Visual Studio Code, GitHub, Jupyter Notebook, LaTeX

**Lab Skills:** Pipetting, Membrane Filtration, Disk Diffusion, IDEXX Quanti-Tray