Software Engineering Internship
Benioff Ocean Science Laboratory
University of California, Santa Barbara
2023-2024

The Benioff Ocean Science Laboratory is seeking UCSB students with interest in software engineering, marine science, and artificial intelligence

About the Organization
Based at the Marine Science Institute at UCSB, the Benioff Ocean Science Laboratory applies marine science and technology to create scalable solutions to pressing ocean health challenges. The research group both manages and financially supports projects that address a variety of marine issues, including species protection, ocean pollution, and sustainable management of marine resources.

About the Team
The Engineering team at Benioff Ocean Science Laboratory works cross-functionally with scientist-led ocean projects. We support each project in the areas of data management, computer vision, infrastructure, and web tools. We do full-stack development and have flexible development cycles prioritizing needs based on the research mission and project. Some examples of the work include a computer vision pipeline to capture data of plastic and debris, API design and development to provide data that will help industry avoid ship strikes on whales, and database management for ship traffic, whale detections, drone videos of sharks, and imagery from the Baltimore Trash Wheel.

Internship Description
The intern will work with Benioff Oceans engineers and scientists to build software tools that will support the various projects and our technology infrastructure. This internship will focus on setting up our machine learning environment for success. This can range from setting up computer vision inference pipelines, updating APIs, and developer operations. They will learn the basics of computer vision modeling, learn how to develop in our tech stack, make code changes, and debug as necessary. This internship will provide valuable experience to students actively pursuing graduate school or a career in computer science, machine learning, marine science, and/or technology.

Responsibilities
- Make code changes to our Google Cloud infrastructure
- Learn about computer vision data pipelines and apply learnings to our projects
- Code reviews, code cleanliness, and documentations that follow our engineering protocols
Basic qualifications
➢ Currently pursuing an undergraduate or graduate degree at UCSB
➢ Programming ability in at least one main language: Python, Java, etc.
➢ Curious to learn and become an expert on machine learning environments

Additional preferred qualifications
➢ Proactive, attention to detail, and ability to work independently
➢ Familiarity with Google Cloud and development in cloud infrastructure
➢ Awareness of SQL, Machine Learning, Computer Vision, and/or modeling

This is a part-time internship (approximately 10-15 hr/wk) for the Fall 2023 and Winter 2024 quarters (~6 months, flexible start/end dates), with the potential to extend into the Spring 2024 quarter based on performance and funding availability. Undergraduate student compensation is $18/hr and graduate student compensation is $20/hr.

The Benioff Ocean Science Laboratory is committed to promoting diversity, equity, inclusion, and justice (DEIJ) in our field of marine science. We proactively strive to bring the voices, intellect, and talents of people of all colors, backgrounds, and identities into our work to further science and conservation, and we commit to taking concrete actions to achieve our vision of a more diverse and inclusive organization. We strongly encourage candidates from marginalized or underrepresented groups to apply.

We encourage all applicants to submit an optional Statement of Contributions to Diversity with their application materials. Please describe and give specific examples of how you have worked to enhance or develop your awareness on issues of diversity and inclusion in the workplace or other professional or academic environments.

To apply, please send a cover letter, resume, and the optional Statement of Contributions to Diversity to bosl-contact@ucsb.edu with the subject line “Engineering Internship” by September 1, 2023.

The University is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching and service.

The University of California is an Equal Opportunity/Affirmative Action Employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.