

Dive into the **Bridge to Ocean Exploration (B2OE) Program** with the Ocean Exploration Cooperative Institute (OEI) at the **University of Rhode Island's (URI) Graduate School of Oceanography (GSO)**! Dip your toes into the multidisciplinary world that is ocean science with opportunities in video/data engineering, media asset management, technology asset management, applied coral science, and multimedia production.



The OEI (<https://web.uri.edu/oeci/>) is a unique consortium of top oceanographic institutions: URI, Woods Hole Oceanographic Institution (WHOI), University of New Hampshire (UNH), the University of Southern Mississippi, and the non-profit, Ocean Exploration Trust. They work together to push the boundaries of ocean exploration with research and innovation in remotely-operated and autonomous vehicle operations, virtual engineering connectivity, and ocean science communication and engagement.

A core mission of the OEI is to inspire future generations of ocean scientists and engineers, and support the Blue Economy. The B2OE Program, based out of URI/GSO's Ocean Science Exploration Center, is an experiential program key to advancing this mission. Currently, the OEI is recruiting **up to eight students** to participate in this **PAID, part-time, experiential learning program** within these potential, project pathways:

- Computer science and machine learning**
- Ocean exploration data science**
- Systems development, ocean technology management**
- Tropical and temperate coral research**
- Media asset management**
- Multimedia production, storytelling, and/or video editing**

Project Pathway Breakdown- Computer Science, Machine Learning (ML) Video Analysis:

- The Rhode Island Department of Environmental Management (DEM) is interested in studying bay scallop habitat in coastal salt ponds (of RI). DEM completes scuba diver surveys each fall to assess the scallop population in Point Judith Pond. For the last several years, Dr. Chris Roman's robotics lab at URI has also collected bottom images using a robotic kayak to evaluate how computer vision methods could be used to document the scallop habitat. These data are currently being processed using both manual counts and automated artificial intelligence (AI)-based methods to detect scallops in the imagery.
 - Results from this work are helping evaluate the potential for robotic tools and will identify future improvements to make the system more effective.
 - Participation in the project would entail working with the collected images, vehicle navigation data, and the YOLO AI program for identifying scallops
- Connections to deep-sea machine learning applications will be explored
- *Useful coursework/experience requested for this project pathway:*
 - Seeking students who have completed at least 1 year at CCRI
 - Suggested courses:
 - Computer literacy, including familiarity with programming languages (e.g Python), markup languages (HTML, XML), operating systems (e.g. Linux) and data structures/algorithms
 - Introduction to Software Engineering, Programming Concepts, Database Design & Management, Technical Math
 - Interest in image processing and/or marine habitat assessment

Benefits to BOE Program participation:

- PAID, part-time opportunity; up to \$17/hour salary (paid via stipend)
- Potential for onsite and/or tele-work
- Exposure to cutting-edge ocean science, engineering, and media production technologies and best practices.
- Collaboration with OECl personnel; field trips to OECl affiliated institutions and/or industry sites.
- Opportunity to remotely participate in expeditions aboard NOAA *Okeanos* and (EV) *Nautilus*.
- Peer-to-peer interaction with other ocean science and exploration interns.
- Networking opportunities with industry professionals and other students during a (virtual) "Blue Economy Career Awareness Fair"

In addition to the above mentioned part-time experience, **additional program requirements and expectations include:**

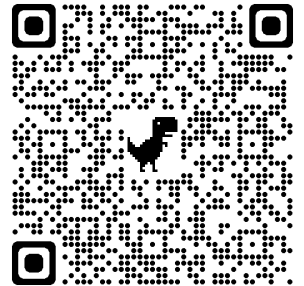
- Time commitment of up to 10h/week (November 2023- May 2024)
- Weekly tag-ups with mentors to gauge project progress and answer questions (mentors are also available via email for questions, etc. at any time)
- Bi-weekly tag-ups with B2OE program coordinator to gauge project progress and address any questions/issues
- Participation in OECl student events, including the Blue Economy Career Awareness Fair
- Final project summary report and presentation
- Participation in pre- and post-experience evaluation

Eligibility:

- U.S. Citizenship (or F-1, J-1 visa status if applicable)
- Currently enrolled CCRI students (undergraduate/associate's degree, and/or workforce certificate candidates)
- Degree, major, or intent to major in a field relevant to the OECl's mission; these can include, but are not limited to: STEM (science, technology, engineering and math), computer science, media production and graphic design, communications, education, and/or business operations/administration.
 - *Preferred (but not required) for this pathway: Computer Studies Students (all concentrations)*

Application Requirements:

- **Interested students must complete the [OECl BOE online application](#) on or before 11:59 pmET, October 9, 2023.**
- In addition to this application, interested individuals will also be required to **submit their current resume or CV with 3 professional references listed** (who can speak to the applicant's character and professional and/or academic background- this can be a professor, advisor, teacher, community member, work supervisor, mentor, etc.).



Applications will be reviewed and analyzed based on merit and relevant experience. Potential participants will be notified by **October 16, 2023**, for an in-person or virtual interview. Final selections will be made on or before **October 30, 2023**, and candidates will be notified of their program status. **The anticipated program start date, with an on-site orientation at URI's Graduate School of Oceanography campus in Narragansett, RI, will be November 9, 2023.**

Questions? Please contact Holly Morin (holly_morin@uri.edu).