

Cullen Molitor

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Education

M.E.D.S. | 2022 | Bren School of Environmental Science & Management, UCSB

Master of Environmental Data Science Candidate

Capstone Project: An open-source pipeline for remote sensing of crop yields under environmental change in Sub-Saharan Africa

B.A. | 2014 | Humboldt State University

Major: History

Minor: Mathematics

Minor: Scientific Diving

Certificate | 2018 | Santa Barbara City College

Marine Diving Technology

Work Experience

Ocean Health Index Fellow | National Center for Ecological Analysis and Synthesis, Santa Barbara, CA

May 2022 to September of 2022 (forthcoming)

- Data scientist for the Ocean Health Index Project
- Preparing, processing, and synthesizing data to calculate Ocean Health Index scores

Teaching Assistant | Department of Economics UCSB, Santa Barbara, CA

October to December of 2021

- Teaching assistant for *Twentieth-Century United States Economic History*

Biological Science Technician | Channel Islands National Park, Ventura, CA

May to October for 2017, 2018, 2019, and 2020

- Seasonal scientific diver for the Kelp Forest Monitoring Program
- Data collection including algal, invertebrate, and fish communities
- Data entry, QA/QC, analysis, and reporting
- Designing a new community trend report which focuses on MPA effects

Second Captain | Truth Aquatics, Santa Barbara, CA

July 2019 – September 2019

- Driving and maneuvering 75' vessel and accompanying skiff
- Vessel maintenance
- Monitoring dive conditions

Diver/Tender | Underwater Construction Corporation, Stevensville, MI

January 2019 – April 2019

- Commercial diver and tender at Donald C. Cook Nuclear Power Plant
- Dive station setup/breakdown
- Operating heavy equipment and towing large, enclosed trailers

Deck Hand/Divemaster | Spectre Dive Boat, Ventura, CA

March 2017 – July 2019 (part time)

- Deckhand for a recreational dive boat that dives Anacapa and Santa Cruz Islands
- Vessel maintenance
- Monitoring dive conditions
- Deploying and recovering anchors

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Head of Water Department/Scuba Instructor | Pacific Outfitters, Eureka, CA

September 2015 – December 2017

- Managing the scuba, fishing, and kayak departments for a locally owned outdoor store
- Teaching all levels of scuba courses
- Dive gear inspection, servicing, and consultation

Director of Scuba | Malibu Divers, Malibu, CA

June to August for 2014 and 2015

- Managing the summer scuba classes for Camp Emerald Bay on Catalina Island
- Teaching or assisting in scuba and first aid classes
- Overseeing and training a staff of 12 dive professionals
- Overseeing dive related paperwork, record keeping, and equipment maintenance

Volunteer Experience

Education Program Volunteer | Channel Islands National Park, Ventura, CA

October 2019 to May 2021

- Developing an R Shiny web application to display Kelp Forest Monitoring Program (KFMP) data
- Makes KFMP protocols, data, videos, and photos accessible in a single and interactive web application
- Made to engage students in learning about long term monitoring and kelp forest ecology

Scuba Instructor | Humboldt State University, Arcata, CA

August 2014 – May 2017

- Volunteer dive instructor for the Scientific Diving Program
- Assisting in classroom presentations, pool sessions, and open water dives
- Classes included: beginning, advanced, scientific, rescue, first aid/CPR/AED/O2, and leadership diving

Volunteer Diver | Reef Check California, Mendocino, CA

January 2013 – December 2015

- Volunteer diver for the near shore rocky reef citizen science monitoring efforts
- Participated in surveys along the north coast of California from Point Arena to Patrick's Point
- Data entry and QC/QC

Publications

Molitor, C., Cohen, J., Cognac, S., and Lewin, G. An open-source pipeline for remote sensing of crop yields under environmental change in Sub-Saharan Africa. Poster presented at: New Horizons in Conservation Conference 2022. 2022 Mar 29-31. Virtual Event.

Molitor, C., McClure, T.I., and others. Channel Islands National Park Kelp Forest Monitoring Program Kelp Forest Community Trend Report for 2005-2019. Natural Resource Report Series. National Park Service, Fort Collins, Colorado. (In preparation)

Molitor, C. and others. Channel Islands National Park Kelp Forest Monitoring Program Annual Report 2019. Natural Resource Data Series. National Park Service, Fort Collins, Colorado. (In preparation)

Molitor, C. and others. Channel Islands National Park Kelp Forest Monitoring Program Annual Report 2018. Natural Resource Data Series. National Park Service, Fort Collins, Colorado. (In preparation)

Sprague, J.L. and others. Channel Islands National Park Kelp Forest Monitoring Program Annual Report 2017. Natural Resource Report Series. National Park Service, Fort Collins, Colorado. (In preparation)

Sprague, J.L. and others. Channel Islands National Park Kelp Forest Monitoring Program Annual Report 2016. Natural Resource Report Series. National Park Service, Fort Collins, Colorado. (In preparation)

Awards

2021 MEDS Recruitment Fellowship

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2021 Advanced Technology Grant
2019 National Park Service STAR award
2015 PADI Elite Instructor award

Skills

Computer Languages

Fluent: R, Python, Bash, and Markdown
Proficient: SQL, CSS, and PowerShell
Novice: HTML, and MATLAB

Computer Software

RStudio, JupyterLab, Visual Studio Code, Bash, Git, GitHub, Google Cloud Platform, Google Earth Engine, Microsoft Planetary Computer, Docker, Kubernetes, Virtual Box, Microsoft Hyper-V, VMware Workstation, pgAdmin, SQLite, MATLAB, JMP, Tableau, Microsoft Access, Microsoft Office, and more

Boating

2019 USCG Merchant Mariner Credential, Master Near Coastal license for vessels not greater than 100 tons
2019 Assistance Towing Endorsement
2012 California Waterways Boating Safety Certificate
2003 Michigan DNR Boating Safety Certificate

Diving

- NPS Dive Examiner
- AAUS scientific diver
- PADI Master Scuba Diving Trainer
- NAUI Instructor
- ADCI and ACDE commercial diver
- Hyperbaric chamber operator
- CCR diver (AP Inspiration & rEvo III)
- ANDI occupational nitrox diver
- Ice diver
- Regulator repair technician (Atomic & Aqualung)
- Cylinder visual inspector

Links

[Personal GitHub](#)

[Personal Website](#)

[Bren School Profile](#)

[Capstone Project Description](#)

[Capstone GitHub Organization](#)