

SHAWN ALBERTSON

OCEAN/MECHANICAL ENGINEER

CONTACT



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RI / open to relocation

SKILLS

Python	MATLAB
SOLIDWORKS	LabView
C++	Numerical Modeling
Labview	CNC Mill
Vector Calculus	Adobe Illustrator

EDUCATION

M.S. Ocean Engineering, 2023

University of Rhode Island

GPA 3.77

Hydrodynamics, Control of underwater vehicles, Air-sea interactions, Wave models, Biomimetics, Boundary element methods

B.S. Mechanical Engineering, 2021

Olin College of Engineering

GPA 3.74

Finite Element Analysis, Controls, Thermodynamics, Transport phenomena, Software Design (Python), Data Science (R), Mechanics of materials

SUMMARY

I am an Ocean Engineer with a diverse background in mechanical engineering and oceanography. My research combines numerical modeling with physical system development, where I am creating a digital twin to actively control floating structures as they experience surface water gravity waves.

ENGINEERING EXPERIENCE

Graduate Research Assistant

2021-2023

- Digital twin development for active control of floating bodies
- Real time water wave measurement and phase resolved wave forecast in irregular seas, including nonlinear corrections for wave shape and amplitude dispersion
- Moving ballast actuator responds to previewed wave forces within constraints with nonlinear Model Predictive Controller

LAIR Lab Marine Robotics Engineer

2021

- Prototyping and stakeholder driven design of marine robotics for water quality monitoring in offshore fish farms
- Conceptualized designs to work within project goals and constraints
- Built initial prototype for tank testing which served as platform for continued work

SAE BAJA Off-road vehicle Test Lead

2017-2019

- Added test track features, oversaw drive days
- Designed lightweight and durable seat, body panels, engine splash guard
- Organized fabrication timeline to ensure a competition-ready vehicle

Desalination Research Assistant

2019

- Designed and validated lab scale reverse osmosis desalination system
- Optimized pressure vessel to contain salt water at 1000 psi
- Implemented data collection system to gather data continuously for over 48 hours

PPE Process Engineer

2020

- Produced more than 5,000 face covers through acquisition and operation of a laser cutter during April 2020
- Streamlined production processes and volunteer coordination to ensure high volume and quality output

ADDITIONAL EXPERIENCE

Commercial Fisherman, P.W.S Alaska

2020

- Hauled gear for 14 hours per day in the world's most sustainable fishery

Bicycle Mechanic

2020

- Responsible for a range of repairs, trained new mechanics, worked closely with customers