

MACKENZIE STUART

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Motivated by impactful and meaningful projects that make a difference in the world. Team player thriving in fast-paced environments. Avid sailor, ocean explorer, thinker, and creator. Mechanical Engineer specializing in design and creation.

EXPERIENCE

WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, MA Summer 2023

Mooring Operations

- Assisted in the deployment and recovery of the Global Irminger Sea Array.

VICIS INC., Seattle, WA

2016-2023

Leading helmet design firm creating Time Magazine's Top Inventions of the Year twice (2019, 2021)

Test/Design Engineer

Designed helmet components and systems; implemented new test apparatuses, fixtures, and protocols

- Developed, tested, and analyzed internal padding systems of helmets to reduce forces to the head during impacts, revolutionizing the helmet market forever.
- Design and efficiency modeling of new lattice structuring leading to the production of the #1 rated helmet in safety by Virginia Tech and NFL testing.
- Managed all testing and analysis of the new helmet system, ultimately selected as the Head Health TECH Helmet Challenge winner in 2021.
- Created a custom fitment system starting from heavy face-to-face customer and athlete feedback leading to an automatic fitment process for 3d printed custom helmet interiors.

WEST COAST INSULATION, Seattle, WA

2014-2016

Manufacturer of engine covers for ships to meet thermodynamic regulations

Engineer

Consulted with clients to design and implement engine covers on ships around the globe

- Scanned and modeled complex ship engine components to design custom insulating wraps that dramatically reduced heat loss, improved engine efficiency and met thermal regulations.
- Developed thermodynamic models to assess energy usage in engines aiding in the design of intricate engine covers.
- Led international teams in Europe, Canada, and Central America in the installation of engine covers and ensured project execution through on-site finalization.

SSA ACOUSTICS, Seattle, WA

2013-2014

Acoustic design firm working in room acoustics, sound insulation, and mechanical system noise reduction

Engineer

Performed all sound measurements and field recordings for data interpolation

- Devised acoustical maps and models to improve room acoustics.
- Created plans for companies to reduce Environmental noise near protected wildlife areas.

NORTH SAILS, Portsmouth, RI

2012-2013

Sail manufacturer for high-performance boats around the globe

Sail Maker

Sail design, creation, and repair

- Designed and restored sails from custom small boats to transoceanic Volvo Ocean Race boats.

WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, MA

Summers 2011-2012

World leading research center advancing the frontiers of Ocean Knowledge

Engineering Intern

Mooring components and systems design for off-shore oceanographic data collection.

EDUCATION

UNIVERSITY OF Washington, Seattle, WA

2019

Completed 14 credits towards MS in Physics

UNIVERSITY OF VERMONT, Burlington, VT

May 2012

Bachelor of Science, Mechanical Engineering, Minor in Mathematics