

Nicholas Nelsonwood

Education

2014–2019 **Princeton University**, Princeton, NJ, GPA: 3.62.
Bachelor of Science in Engineering: Mechanical and Aerospace Engineering
Minor in Computer Science

Experience

Feb 2024–**Robonautics**, *Mechatronics Engineer*, Portland, ME.
Current Research and development of an autonomous sailing catamaran
Procurement, set up, and process creation for a new facility, including machine shop
Rapid prototyping of electro-mechanical upgrades

Sept 2022–**Running Tide**, *Mechanical Engineer*, Portland, ME.
Nov 2023 R&D for production, deployment, and seeding methods of carbon buoys
Data collection and analysis to enable minting carbon credits
Liaise with suppliers of industrial equipment, sensors, heavy machinery, etc.
Support material analysis for carbon buoy recipe formulation
Draft SOPs for processes and equipment calibration and maintenance

Nov 2020–**Farmhand Automation**, *Mechatronics Engineer*, Biddeford, ME.
Jun 2022 Develop and manufacture rover prototype of farming robot
Integration testing and debugging for combined mechanical, electrical, and
software/firmware systems and sub-systems
Building Arduino library for robust, SAMD21 based, inter-node I2C communication
Design of PCBs in Eagle including integration of 3D components and boards for Fusion 360
Fabrication of wiring harnesses and population of surface mount and thru-hole PCBs
Installation, utilization, and supervision of machine shop

Sept 2019–**Navatek**, *Mechanical Engineer*, Portland, ME.
Nov 2020 Design of mechanical systems, for both shipboard and laboratory settings
Testing, maintaining, and upgrading fluid modeling software
Construction and programming of sensor networks for digital twin systems
Creating math and physics-based models of complex mechanical systems

2013–2017 **Limbeck Engineering LLC**, *Cofounder & Engineer*, Freeport, ME.
Co-founded an LLC to pursue engineering projects in high school and college
Engineered and built two prototype research ROV/AUVs for near-shore exploration [[Blog Link](#)]
Designed, created, and managed a Kickstarter for a DIY Binary Clock [[Kickstarter Link](#)]

Skills

Software	Google Apps, Microsoft Office (esp. Excel & Word), LaTeX, Illustrator, Photoshop
CAD	Fusion 360, Eagle, SolidWorks, Creo, Catia (3DEXperience), Rhino
Programming	Arduino, C/C++, Python, Git, MATLAB Limited: VBA, Assembly, Linux, Java, FORTRAN, G-code
Tool	3D Printer, CNC Machine, Laser Cutter, Soldering, Carpentry Tool,
Proficiencies	Limited: Milling Machine, Lathe, Water Jet