Al Miller III  
Software Engineer  
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ABOUT

PROFICIENCIES

EMPLOYMENT

UNIVERSITY

INTERESTS

Portland, OR 97214+1 (860) 460-1260

Software engineer passionate about creating a holistically sustainable world.

**United Technologies**, Windsor Locks, CT 2017 – 2018

*Senior Thesis, A Novel Method for Sealing Porous Plates*

Leader of a student team, working with faculty and manufacturing companies to design and analyze a novel method for sealing heat-exchanger porous plates on the CST-100 Starliner crew transport capsule for the International Space Station, reducing process costs by 90%; validated the design through Finite Element Analysis (ANSYS LS-DYNA) and physical testing, and presented the concept to executives at United Technologies for future adoption

**General Dynamics, Electric Boat**, New London, CT 2016

*Intern*

Assisted a team of project engineers in execution of a large capital construction project of an on-shore test facility at Cape Canaveral for the US Navy through CAD modeling of system components with Siemens NX; interpreted and improved HVAC system control diagrams and building P&IDs, and performed head loss calculations for large piping systems using Excel

**Nguyen Research Group**, Storrs, CT 2015 – 2018

*Researcher*, nguyenresearchgroup.com

Co-authored *A Biodegradable Piezoelectric Force Sensor* in PNAS (14% acceptance rate)

Co-authored *3D nano- and micro-patterning of biomaterials for controlled drug delivery* in Future Science

**Spring Valley Student Farm**, Storrs, CT 2015 – 2018

*Farmer*

Volunteered at an organic, self-sustaining farm; lived on the farm in 2017–2018, grew a community through education and outreach; co-designed and built a functional 1,000-gallon aquaponic system

**University Residential Life**, Storrs, CT 2017 – 2018

*Resident Assistant*

Facilitated an environment of inclusion and support within a community of over 40 students

**Engineers Without Borders**, Storrs, CT 2014 – 2016

*Volunteer*

Supported development of a small-scale irrigation system to transport fresh water to remote communities Ethiopia’s Amhara region; led design discussions and communications with an international project team

HVAC. Finite Element Analysis (ANSYS CFX/LS-DYNA). Drafting and CAD (AutoCAD, Siemens NX, Solidworks). Coding (Excel VBA, MATLAB/Simulink, Python, C/C++, JavaScript, AWS). Project Management (client engagement, EVM, Primavera P6). Agile.

**University of Connecticut**, Storrs, CT 2014 – 2018

*B.S. in Mechanical Engineering*, *Minor in Philosophy, GPA 3.65*

Congressional Certificate of Merit, ASME, Dean’s List, New England Scholar, UConn Honors, Pi Tau Sigma, Alpha Lambda Delta, founder of Philosophy Club

**MPR Associates, Inc.**, Washington, D.C. 2018 – Present

*Consulting Engineer*, with select project experience including:

* Designed, validated, and championed IECC/NFPA- compliant combined HVAC and exhaust systems for battery energy storage systems; produced HVAC power and control schematics and mechanical drawings using AutoCAD and performed computational fluid dynamics calculations to validate designs using ANSYS CFX; adoption of designs saved millions of dollars in retrofits

Naturalism (hiked entirety of Pacific Crest and Appalachian Trails). Music (classical pianist).