

DAVIS COLE

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EDUCATION

Reykjavik University, Iceland School of Energy

Jul 2021 – Nov 2021

Master of Science, Sustainable Energy Engineering

GPA: 8.6/10

University of New Hampshire, Durham (UNH), Durham

Aug 2017 – May 2021

Bachelor of Science, Mechanical Engineering

GPA: 3.45/4

- **Project Lead – Senior Capstone Project**

- Investigated ventilation and airflow strategies to reduce lateral COVID-19 aerosol transfer in classrooms
- Performed experiments and analyzed test data to validate models
- Developed Fluent CFD models to validate experiments and evaluate transfer prevention methods

- Pi Mu Epsilon (Mathematics Honors Society)

Technical Skills

3D Modeling, CFD (OpenFOAM, Fluent), FEA (Ansys, Mecway), Scripting (MATLAB, Python, Bash, C++)

PROFESSIONAL EXPERIENCE

R&D Verification Engineer

Sept 2022 – Present

Ansys Inc., Fluids Business Unit

Lebanon, NH

- Facilitating and maintaining daily regression tests using Azure DevOps Pipelines
 - Overhauled existing workflow, increasing agent uptime by 50%, reducing cycle time by 100%
 - Developed automated pipeline saving 2 hours a week for 5 engineers each
 - Identifying and resolving bugs by communicating with developers
- Upgrading test results database frontend website
 - Migrated legacy database website features from Perl DBI to Django
 - Implementing enhancement suggestions from fellow test engineers
- Developing automated tests to validate new release features

Verification & Validation Test Engineer

Jan 2022 – Sept 2022

DEKA Research & Development Corp.

Manchester, NH

- Linear encoder characterization and test fixture overhaul
 - Evaluated encoder performance to prove concept design and ensure subsystem requirements are met
 - Developed Arduino/Python SPI communications to display linear encoder output in real-time
 - Modified and 3D printed production-line parts for test fixture compatibility
- Upgraded and validated lab environment logging system and analysis tools (C# backend, Python frontend)
- Performed ad hoc testing to determine the effect of system compliance on medical device performance

Mechanical Engineering / Simulation Intern

Jun 2020 – May 2021

DEKA Research & Development Corp.

Manchester, NH

- Utilized CAE methods in open-source software packages to support design team efforts
 - Performed root cause analysis of air desorption events within an infusion pump tube using CFD
 - Measured load vs. displacement of tubing, developed equivalent hyperelastic FEA models in Mecway

PERSONAL EXPERIENCE

President – American Society of Mechanical Engineers (ASME)

Jan 2020 – May 2021

University of New Hampshire, Durham

- Communicated with members of industry to organize presentations at the University and tours of facilities
- Coordinated club meetings and webinars, executive board meetings, and spread awareness of ASME

Ambassador – The GREEN Program (TGP)

Dec 2019 – Aug 2020

- Official representative of TGP at UNH, attended study-abroad events and shared Program news
- Studied renewable energy production and its economic impact at Reykjavik University, and toured geothermal, hydroelectric, and biofuel power plants
- Presented a capstone project on algae biodiesel production and its role in Iceland's energy independence

Member – STEMbassadors

Feb 2019 – May 2021

University of New Hampshire, Durham

- Motivated K-12 students across New Hampshire to pursue STEM through hands-on activities
- Attended a NSF research conference at Boston University to discuss the improvement of STEM outreach programs