

David Alexander

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EDUCATION

North Carolina State University

Expected Graduation May 2026

Bachelors of Science in Mechanical Engineering, 3.75 GPA

- Dean's List (2022-Current)

SKILLS

- **Mechanical Design:** Solidworks (CAD/CAM/FEA), Inventor, Fusion 360, Design for Manufacturability
- **Coding:** MATLAB, Python, Java, SQL, basics of ROS, C, and C++
- **Process Analysis:** Lean Manufacturing, Lean Six Sigma, Rapid Continuous Improvement
- **Certifications:** Certified Solidworks Professional in Weldments, Sheet Metal, Surfacing, and Drawing

EXPERIENCE

Altec Industries

May 2024 - Present

Mechanical Engineering Co-op

- Developed a command-line interface in python to automate everyday tasks, saving over 120 working hours per year.
- Redesigned the inventory organization of 3 high-mix, high-volume weld cells; alongside other initiatives, this led directly to consistent on-schedule production in a historically slow area.
- Prototyped, fabricated, tested, and implemented solutions for material handling and fixturing, leading to improved ergonomics and reduced process times.

Digital Manufacturing and Polymeric Materials Lab

Dec. 2022 - May 2024

Undergraduate Researcher

- Constructed a 4-axis scrolling DLP printing system capable of printing multi-material micron-level features at a traditional scale.
- Developed an energy concentration simulator in MATLAB to predict over curing in polymers, decreasing prototype time and waste material.

Storm Technologies, Inc.

May 2023 - Aug. 2023

Mechanical Engineering Intern

- Tuned industrial control systems using thermodynamic probing to boost the output of large-scale power systems.

EXTRACURRICULARS

NCSU Engineering Career Fair

Jan. 2023 - Present

Shipping and Analytics Coordinator

- Ran shipping logistics alongside other students for the NCSU Engineering Career Fair.
- Analyzed ways to improve traffic control, volunteer retention, and the recruiter experience.

Reactor Simulation Software Interface

Dec. 2022 - May 2023

Assistant Undergraduate Researcher

- Improved the nuclear reactor core design process by connecting a python-based UI and backend to the Reactor Dynamics and Fuel Modeling (RDFMG) group's computing cluster.