

# Alder Nadon

nadon.a@northeastern.edu

(505) 500-5544

aldernadon.com

Santa Fe, NM

## Education

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### Northeastern University

Boston, MA

*Candidate for Bachelor of Science in Mechanical Engineering | 3.96 GPA | Dean's List*

*Expected May 2027*

- Courses: Heat Transfer, System Analysis and Control, Dynamics, Fluid Mechanics, Thermodynamics, Mechanics of Materials, Probability and Statistics

### Santa Fe High School

Santa Fe, NM

*Graduated class salutatorian, National Honor Society, Varsity Tennis*

*May 2023*

## Experience

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### AV / Aerovironment / BlueHalo

Albuquerque, NM

*Systems Engineering Co-op – Space Technologies*

*June 2025 – Present*

- Owned requirements flowdown and traceability across the systems V, decomposing stakeholder needs into system/subsystem requirements and maintaining verification status via RVCs/RTMs
- Migrated legacy, document-based requirements into an MBSE workflow, building an "as-is" SysML model hierarchy in Cameo Systems Modeler to improve traceability, impact analysis, and product definition
- Linked requirements to model elements and verification methods (test/analysis/inspection/demonstration), enabling cleaner requirement allocation and faster verification closure
- Wrote customer-facing verification test reports from test data, clearly documenting procedures, results, and evidence-backed requirement compliance for space-qualified hardware programs
- Built/updated flight-unit compliance matrices to ensure full requirements coverage from specification to verification artifact to delivered evidence package for customer acceptance

### STEM Scaffold Santa Fe

Santa Fe, NM

*Mentor*

*Oct 2022 – Dec 2022*

- Mentored and guided 20+ students through a 10-week introductory engineering curriculum
- Introduced beginners to TinkerCAD, Arduino coding and wiring, engineering principles, and the physics of photoresistors

### CURRENTS New Media

Santa Fe, NM

*Intern*

*June 2021 – July 2021*

- Installed A/V equipment, walls, fixtures, mountings for art/technology exhibition
- Coordinated with clients to prepare installations in a fast paced environment
- Managed A/V operations for theater space, including customer interaction and technical troubleshooting

## Projects

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### Laser-Controlled Arcade Shooting Game

*Sept 2023 – Dec 2023*

- Created laser-cut components using AutoCAD under tight deadlines, including a custom-designed laser pistol with internal wiring and a trigger mechanism
- Proposed and fabricated design features such as servo actuated moving photoresistor targets with diverse difficulty-adjusted behaviors
- Collaborated with teammates to meet project milestones and maintain the project timeline, including implementing project management tools like a Gantt chart, work schedule, and fishbone diagrams

### Radio-Controlled Strandbeest Walker

*Jan 2023 – May 2023*

- Designed a remote controlled walking acrylic kinetic sculpture based off proportioned linkages
- Simulated linkage joints with a motion study in Fusion 360 to examine gait and to design drivetrain
- Laser cut and assembled 300+ custom acrylic parts across 12 gait components
- Evaluated the walking and turning performance over different terrain types

## Skills

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- **CAD & Design:** SolidWorks, Cameo Systems Modeler, AutoCAD, Fusion 360, Rhinoceros 3D
- **Programming & Analysis:** Python (Qt, numpy, numba), MATLAB, SysMLv2, C++, Excel,  $\LaTeX$
- **Prototyping & Tools:** Arduino, 3D Printing (FDM/SLA), Laser Cutting, Power Tools
- **Other:** Arena PLM, Word, Illustrator, Photoshop, InDesign, Krita, Manim, Blender