

Joseph Mathews

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Summary:

Senior Mechanical Engineering student at Northern Arizona University (BSME, Dec. 2025), with experience in engineering design, CAD modeling, and manufacturing. Proficient in SolidWorks, MATLAB, and manual machining, with a background in aerospace, rocketry, automotive, and robotic design through capstone projects and team projects. Strong problem-solving, troubleshooting, and collaboration skills, with a dedicated work ethic in fast-paced, technical environments. Seeking a Mechanical Engineering Summer Internship to apply engineering principles, design optimization, and team-based problem-solving in a professional setting.

Education:

Northern Arizona University	Flagstaff, Arizona	2021-2025
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Bachelor of Science in Mechanical Engineering

- Current Grade Point Average: 3.16

Shadow Ridge High School	Surprise, Arizona	2017-2021
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Engineering CTE Program

- Emphasis in SolidWorks and Robotics
- Enrolled all four years
- Graduated with Honors, Grade Point Average: 3.895

Relevant Courses (NAU):

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| - Intro to Engineering Design- Honors | - Applied Mechanics Statics |
| - Engineering Design: Process | - Mechanics of Materials + Lab |
| - Engineering Design: The Method | - Applied Mechanics Dynamics |
| - Mechanical EGR Design 1 (Capstone) | - Materials Science |
| - Mechanical Engineering Lab (Machine Shop) | - Thermodynamics 1 & 2 |
| - Engineering Analysis | - Heat Transfer |
| - Computer-Aided Design | - Fluid Mechanics 1 |
| - Programming for Engineering and Science | - Advanced Fluid Dynamics |
| | - Machine Design 1 |
| | - Electrical Engineering 1 + Lab |
| | - Compressible Flow |

Accomplishments/Certifications:

- Eagle Scout
 - o 27 Merit Badges, including Nuclear Science and Electricity
 - o Eagle Project: Collected and donated over 500 pairs of shoes to Soles4Souls Foundation
- Earned the President's Scholarship, Northern Arizona University
- Arizona Unarmed Security Guard Card

Skills:

- Proficient in SolidWorks and MATLAB
- Excellent problem solver and troubleshooter
- Strong leader with great team-building skills
- Critical Thinker
- Logical reasoning
- Meticulous
- Adaptable
- Proficient with manual milling and lathe machines

Experience/Projects:

- NAU-Mechanical Engineering Capstone Project, "Flying Squirrel" Jan. 2025-Dec. 2025
 - o Designing and creating a compact and affordable robot to assist with physical rehabilitation for recovering stroke patients
- NAU-Rocket Club Jan. 2025-Present
 - o Learning new skills and knowledge relating to rocketry and other engineering applications
 - o Preparing for the Tripoli Level 1 certification
- NAU-First Nation's Launch (FNL) Rocket Team Jan. 2025-Present
 - o Assisting the capstone team with the construction of their rocket for their competition
- NAU-MK 2 Modular UAV Platform [Engineering Design: The Method] Aug. 2024-Dec. 2024
 - o Team designed a modular UAV platform that improved upon an existing drone platform to operate in military and humanitarian environments- Design only, no physical model
- Quartermaster, Northwind Sabers Aug. 2021-May 2024
 - o Maintained and repaired all equipment's electrical systems to ensure optimal operations
 - o Trained and mentored assisted quartermasters
 - o Organized and inventoried equipment utilized by the club
- NAU Society of Automotive Engineers (SAE), Baja/Formula Teams Sept. 2023-Apr. 2024
 - o Assisted the teams in designing and manufacturing an off-road vehicle and formula vehicle to compete in a competition against other schools
- Solar Go-Kart Team, Shadow Ridge High School Dec. 2020-May 2021
 - o Tasked to design and build a solar powered go-kart to participate in state competition
 - o Worked on structure of the kart, designed and installed electrical system, and improved safety features for the driver
 - o Our team won first place in the state
- Four years in Engineering CTE Program, Shadow Ridge High School Aug. 2017-May 2021
 - o Three years of working with Robotics
 - o Four years of working with SolidWorks

Work History:

- Security Guard, S.A.F.E. Management Jun. 2023-Present
 - o Maintain security at events held at State Farm Stadium and Chase Field
 - o Provide excellent customer service and general aid for guests
- Package Handler, FedEx Ground, Goodyear AZ Facility Jun. 2023-Aug. 2023