

Alec Zodrow

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Summary of Qualifications

- 7+ years of education experience in Engineering topics
- 2+ years of experience in Research and Development within school and internship settings
- Software Experience: Solidworks, MATLAB, FEA, Zoom and Microsoft Office Suite

Education

Northern Arizona University (NAU) Expected: May 2023

Bachelor of Science, Mechanical Engineering, 3.8 GPA

- Relevant Coursework: Fluids, Thermodynamics, Machine Design, System Dynamics, Heat Transfer, Machining, Experimental Methods, Compressible Flow

University of Groningen, Netherlands Jan - Jun 2022

- Spent an academic semester in the Netherlands while successfully adapting to a new academic culture
- Developed cross-cultural communication, problem-solving, and interpersonal skills while gaining a global mindset and increased empathy

Paradise Valley High School May 2019

- Center for Research Engineering Science and Technology (CREST) Program: Engineering, 3.7 GPA

Internship Experience

Innovative Health, Mechanical Engineering Intern, Scottsdale, AZ Oct 2021 – Jul 2022

- Developed novel reprocessing methods for catheters adding to company's scope of processable devices
- Assisted in the design and development of a catheter vertical washing system
- Created 10+ process validation and verification testing methods to approve a device for reprocessing
- Modeled and designed components to allow new devices with reprocessing machines

Applied Economics, Intern, Phoenix, AZ Jun 2018 – Aug 2018

- 200+ hours of data analytics experience normalizing urban economic factors in Phoenix, Arizona
- Used Arc GIS to geocode and create data maps for school districts

Engineering Projects

Northern Arizona University Researcher Feb 2023 - Current

- Creating a device that can detect vibrations created from Bark Beetles in Trees

MARS: Escapade Instrument Development Sep 2022 - Current

- NAU student project developing and manufacturing a camera instrument to attach onto a spacecraft that will orbit Mars and return data for the NAU Astronomy program
- Drafted assembly procedures, calculated necessary tolerances, designed and analyzed friction clamp, programmed and performed bolted joint analysis using MATLAB.

Capstone: SAE Aero competition (Manufacturing Engineer) Aug 2022 – Current

- Designing a remote-controlled plane that must carry a payload and follow a set flightpath while being subject to strict technical requirements
- Conducted stability analysis using XFLR5, analyzed worst case loading scenarios using MATLAB and developed plane design using SolidWorks
- Manufactured parts and constructed multiple prototypes while also creating test methods to analyze them

Additional Work Experience

Labor Jacks, Mover/Landscaper May 2020–Aug 2021

Chipotle, Crew Member Nov 2018–May 2019

Albertsons, Courtesy Clerk Nov 2016–Aug 2017

Professional Development

Member, Toastmasters of Flagstaff Jan 2023-Current

Member, American Society of Quality (ASQ) Dec 2021-Current