

# Connor Hoffmann

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## **SKILLS/ABILITIES**

- Finite Element Analysis (FEA)
- Electromechanical Design
- Manufacturing/Machining
- DAQ Systems Implementation
- Process Optimization
- 3D Printing Design
- SolidWorks CAD
- MATLAB Scripting
- Excel proficiency & VBA Scripting
- Product Design and Development
- Tekla Construction Software
- AutoCAD

## **EDUCATION**

**B.S. Engineering, Mechanical Engineering** – *December 2021*  
Northern Arizona University, Flagstaff, AZ

## **WORK EXPERIENCE**

**Standard Structures Inc - Design Engineer**, Flagstaff, Arizona – *February 2025 to Present*

- Designs PEMB (Pre-Engineered Metal Building) using engineering calculations and software
- Ensures PEMB designs are in compliance with International Building Code
- Works alongside Professional Engineers
- Follows PEMB design process including; quote, design, detailing, and manufacturing
- Models large PEMBs layouts in AutoCAD and Tekla

**E3 Energy LLC - Home Energy Efficiency Inspector**, Flagstaff, Arizona – *August 2024 to February 2025*

- Conducts home energy audits: inspects homes identifying areas of energy loss or inefficiencies
- Uses diagnostic tools like pressure transducers, Anemometers, and various blower fans to detect energy loss
- Documents findings from audits, summarizing issues found, and repair recommendations
- Ensures compliance of local and national energy efficiency standards and certifications

**Electric Torque Machines – Mechanical Engineer I**, Flagstaff, Arizona – *January 2022 to July 2023*

- Specialized in electromagnetic FEA of large electric motor computer models
- Conducted design of experiments on Transverse Flux Motors (TFM) to identify advantageous qualities
- Created parametric SolidWorks CAD models of TFM for design iteration
- Wrote multiple code scripts for automated entry of large sets of FEA data
- Collaborated with professional engineers in the design process of TFM
- Met important client deadlines regarding TFM FEA data results
- Improved company FEA modeling capabilities by innovating new meshing techniques

**Electric Torque Machines – Mechanical Engineer Intern**, Flagstaff, Arizona – *May 2021 to January 2022*

- Performed electromagnetic FEA simulations on TFM
- General design of 3D-printed manufacturing aids
- Built and maintained TFM
- Designed outdoor test facility for 40hp TFM for HBK DAQ system

**Enchanted Forest Spas – Pool Technician**, Flagstaff, Arizona – *October 2017 to May 2021*

- Managed multiple pools and spas at a high-end golf club
- Performed maintenance on large pool pump systems
- Maintained diligent daily logs of pool statistics
- Passed county inspections for multiple pools and spas
- Performed chemical weight calculations and unit conversions

## **EDUCATIONAL PROJECTS**

**General Atomics CubeSat Test Fixture** – *January 2021 to January 2022*

- Key contributor alongside a team of 4 engineering students for Senior Project (Capstone)
- Objective is to design, build, and test a fixture that mounts a CubeSat satellite to a spherical bearing
- Financial Manager in charge of the team's \$8,000.00 budget
- Responsible for the design and programming of the General Atomics capstone website using HTML