

Connor Kalvar

Mechanical Engineering Student

Massachusetts Institute of Technology (MIT) Class of 2027

Portfolio at ConnorKalvar.com

Work Experience

UNDERGRADUATE RESEARCHER AT MIT | MeChE Quantum and Precision Measurement Lab group | Cambridge, MA | Jan. 2026 to Present

- Working with Professor Vivishek Sudhir to develop a seismic noise isolation setup for a quantum scale torsional pendulum for use in a physics experiment.
- Work involves creating functional requirements along with selecting sensors & actuators based on noise performance.
- Designing the control system for the isolator to achieve ~4 orders of magnitude of seismic noise reduction at a target frequency of 40Hz.

RISE INTERN | JRC Integrated Systems – Crane, IN | Jun. 2025 to Aug. 2025

- Developed new design requirement management system for testing naval and space defense systems using Jira and Confluence.
- Improved upon old Excel based system with automation features that enhance workflow by automating certain tasks that were previously done manually.
- Worked in a multi-disciplinary team to write documentation for the new requirement management system and create example design requirements for a radar cabinet testing facility.

UNDERGRADUATE RESEARCHER AT MIT | MeChE | Cambridge, MA | Spring 2024

- Prototyped a system that could track thrown track and field implements to estimate distance based on velocity.
- Designed a modular mounting system for sensors that could also be used for other types of data collection such as gait speed and balance.

Projects

FLYWHEEL DRIVEN DART LAUNCHER ANALYSIS | MIT | Spring 2025

- Analyzed data on darts fired from a flywheel driven NERF gun to determine factors that affect behavior of darts.
- Successfully found and verified the effects of dart type and charge time on exit velocity with data analysis techniques.

VIRTUAL MASS DRIVER PROJECT | Spring 2022 to Present

- Created a mass driver system in a virtual combat vehicle simulator that has larger engagement ranges than other weapon systems.
- Used Excel and MATLAB to help design a control system that accounts for projectile drag to increase accuracy.

TREBUCHET DESIGN BUILD PROJECT | Rose-Hulman Institute of Technology - Terre Haute, IN | Jul. 2021

- Designed a floating arm trebuchet that threw tennis balls over 120ft repeatedly and consistently.
- Coordinated with two other students and Rose-Hulman Mechanical Engineering professors to create the design from scratch while working within space constraints of 3ftx3ftx3ft.

Education

2023-2027

Massachusetts Institute of Technology (MIT) | Cambridge, MA

Mechanical Engineering Major

GPA 4.5/5.0

Two year Member of Men's Varsity Track & Field Team

2019-2023

Trinity High School | Louisville, KY

GPA Core 4.0 | Weighted 5.45

Skills

- Excel Master Class for Engineers - Summer 2024 Certification
- Microsoft Office, PowerPoint, Word & Excel
- CAD, Autodesk Fusion 360, Siemens NX
- MATLAB, LUA
- 3D Printing, Lathe and Mill manufacturing

Volunteer Service

- Next Level Coding Club Founder & Volunteer Instructor at Summit Academy
- Architecture Construction Engineering (ACE) Mentor Club at Trinity High School

Contact

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