

Connor Kalvar

Mechanical Engineering Student

MIT Class of 2027 | Portfolio at ConnorKalvar.com

Projects

AUTOMATIC TAPE REEL PROJECT | Summer 2024

Designed a system to help run track quicker by increasing the speed at which distances could be measured. This was accomplished by making a mounting system to attach a motor to automatically reel up 200-foot tape reels commonly used in track and field.

VIRTUAL MASS DRIVER PROJECT | Spring 2022 – Present

Created a mass driver system in a virtual combat vehicle simulator that has engagement ranges far beyond other weapon systems in said environment. Designed a novel implementation of this system. 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 in space constraints.

Work, Volunteer & Leadership Experience

UNDERGRADUATE RESEARCHER AT MIT | 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. This allows athletes to better track progress and gain valuable feedback when throwing into a net at an indoor training facility.

NEXT LEVEL CODING CLUB FOUNDER AND VOLUNTEER INSTRUCTOR |

Summit Academy - Louisville, KY | Oct. 2021-May 2023

Founded a club at my middle school using my programming knowledge to give back to my community and provide an opportunity for students to create and explore larger scale projects. Utilized MIT's Scratch programming language to teach fifth to twelfth graders programming basics through guided project lessons and unguided creative creation.

ARCHITECTURE CONSTRUCTION ENGINEERING (ACE) MENTOR CLUB |

Trinity High School – Louisville, KY | Sep. 2021 – May 2023

MEP team lead for two laboratory renovation projects – chemistry and physics labs. Created 3D mockups, consulted with the client (Trinity teachers), and oversaw creation of new laboratory designs that better met the needs of the modern classroom. Presented project proposals that were successfully implemented and constructed on time.

TEACHING ASSISTANT | Trinity High School - Louisville, KY | Jun. 2022

Trinity Summer STEM Camp - Prepared class materials for middle school students and assisted Mr. Hammer throughout the camp.

Education

2023-2027

Massachusetts Institute of Technology (MIT) | Cambridge, MA
Mechanical Engineering Major

GPA 4.5/5.0

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
- Autodesk Fusion 360 CAD
- MATLAB
- Siemens NX

Contact

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