Aidan L. Kimberley

21 Mystic Ave Winchester MA, 01890 USA | aidanlkimberley@gmail.com | (612)-244-6031
US & Canadian Citizenship

Summary

Analytical and versatile engineering student at McGill University with experience in robotics R&D, data-driven problem solving, and cross-disciplinary collaboration. Adept at applying engineering principles, statistical analysis, and creative design to deliver high-impact solutions. Proven track record in research, leadership, and technical execution, with work featured at the IEEE International Conference on Robotics and Automation. Seeking opportunities to leverage a blend of technical expertise and strategic thinking in engineering, consulting, or finance.

Education

McGill University, Montreal, QC. *expected graduation 2026*

- Bachelor of Engineering, Mechanical Engineering | Minor, Applied Artificial Intelligence
- **CGPA**: 3.88/4 – Dean's Honor List (top 10% in Faculty of Engineering)
- **Awards:** SAG Conference Award Foundation Scholarship, for academic merit and leadership

Relevant coursework:

Statistics and Laboratory Measurement	Numerical Methods in Mech Eng
Principles of Manufacturing	Analog and Digital Electronics
Machine Element Design	Applied Machine Learning

Work Experience

Altec Research/Delsys, *R&D Intern* | Natick, MA | May 2025 - August 2025

- Validated cutting edge computer vision software with an injury prevention application
- Motion Capture data collection, processing, and analysis.

Mass General Hospital IHP, *Research Intern* | Boston, MA | January 2024 - August 2024

- Debugging and optimizing hardware and software for experimental protocols with TMS, and direct current stimulators such as paired associative stimulation and sensory threshold determination.
- Worked independently to solve the technical issues of the lab.
- Data analysis extracting meaningful insights out of noisy data using MATLAB.

Harvard Biodesign Lab, *Undergraduate Research Fellow* | Conor Walsh, PhD | Boston, MA | April 2022 - August 2023 (summer months)

- Worked on the mechanical design, fabrication, and testing of wearable ankle exoskeleton robots and pneumatic robotic control boxes.
- Made designs in Solidworks.
- Fabricated an ankle device and multiple robot control boxes using SLS + FDM 3D printing, electronics assembly, machining, and carbon fiber molding.
- Ran bench-top testing, using Matlab and Simulink to characterize device mechanical properties and iterated on designs to improve metrics such as mechanical advantage, frequency response, stiffness, part yield strength, device longevity, comfort, and adjustability.
- Ran on-body data collection using Qualysis to capture EMG, mocap, force plate, and internal sensing data.

McGill Formula Electric, *Suspension team member* | Montreal, CA | October 2022 - May 2023

- Used NX and Finite Element Analysis to design components for the carbon fiber decoupled suspension system of an electric race car.

Cycle Loft Bike Shop, *Service Technician* | Burlington, MA | May 2021- May 2022

- Built and repaired road, mountain, hybrid, and e-bikes; developed customer service and hands-on problem-solving skills.

Publication

Cooper, M., Canete, S., Eckert-Erdheim, A., **Kimberley, A**., Siviy, C., Baker, T., Ellis, T. D., Slade, P., & Walsh, C. J. (2024). Design & Systematic Evaluation of Power Transmission Efficiency of an Ankle Exoskeleton for Walking Post-Stroke. *2024 IEEE International Conference on Robotics and Automation (ICRA)*, 5526–5532.

Skills

Design & Fabrication

- Manufacturing: *CNC, Carbon fiber molding, thermoforming, SLS/FDM 3D printing, MasterCAM*
- CAD/FEA: *SolidWorks, Siemens NX, AutoCAD, Abaqus*
- Electronics Assembly: *Soldering and cable fabrication*

Analytics & Programming

- Programming/Automation: *Python, Matlab, C, C++, Java, TypeScript*
- Machine Learning: *PyTorch, TensorFlow*
- Simulation Tools: *MATLAB, Simulink, Siemens NX*
- Data processing/Statistical Analysis: *Python, Excel, Matlab*
- Motion Capture: *Vicon, Qualisys*

Management & Communication

- Technical writing & reporting
- Project coordination & team collaboration
- Presentation development and delivery
- Leadership roles in research and engineering teams

Other

Athletics: McGill XC Ski Team, mountain biking, running, weight lifting, rock climbing, MMA
Hobbies: Piano (jazz and classical), design prototyping