

Kendall Binkley

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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA

May 2029

- *Candidate for BS in Mechanical Engineering with a minor in Electrical Engineering and Computer Science*
- *Relevant Coursework:* Calculus I, II & III, Physics I & II, Mechanics and Materials, Solid-state Chemistry, Numerical Computation for Mechanical Engineers, MechE Tools
- *4.5/5.0 GPA*

Fort Payne High School, Fort Payne, AL

May 2025

4/273 in class

4.5/4.0 GPA

RESEARCH/WORK EXPERIENCE

Undergraduate Research with MIT's "The 77 Lab"

May, 2026 - October, 2026

- Developed a mechatronic tilt rotator for scaled excavator models to enable autonomous operator training using human-pose estimation, with the goal of improving training safety, speed, and effectiveness.
- Co-authored two research papers accepted for presentation at an IEEE conference hosted at MIT.
- Designed, prototyped, fabricated, and tested mechanical and electromechanical systems in a rapid research environment.

CLUBS, ACTIVITIES, AND ORGANIZATIONS

MIT Combat Robotics Club, Exec Member, Cambridge, MA

September, 2025 - Current

- Co-driver and designer/technician for ARES, a 30-lb robot competing in the National Havoc Robotics League (NHRL)
 - Design and fabricate armor and offensive configurations using CAD/CAM and a range of manufacturing methods
 - Anti-piercing AR500 steel top armor, weapon deflecting A36 sheet metal bent forks, S7 Hardened Tool Steel primary weapon machined and hardened in-house
- Finalist in NHRL 30-lb weight class, April 2026; quarterfinalist at MIT House Battle 2025 with a 3–2 record
- Purchasing lead and exec member, responsible for handling robot budgets, purchases, and team communications

Makerspace Mentorship, Cambridge, MA

September, 2025 - Current

- Metropolis Project Manus: host open hours, orientations, and tool trainings for the MIT community
- Toolcomm: host tool trainings for the East Campus dorm community, repairing and maintaining power tools, and manage makerspace funds
- MIT Electronic Research Society (MITERs): keyholding member hosting open hours and assisting with personal projects and makerspace maintenance
- Trained and worked with MIT makerspace groups including Hobbyshop, Edgerton Machine Shop, Student Project Lab, and Morningside Academy for Design

East Campus Government & Construction, Varied Roles, Cambridge, MA

August, 2025 - Current

- First East Hall Chair: Responsible for hall management, executive representation, and event organization
- Small Build Lead: Designed and fabricated a double-decker wooden merrygoround capable of supporting over 2,000 lbs for community-wide party/celebration
- Campus Preview Weekend Chair: Responsible for dorm-wide event management for the Spring 2026 semester

7428, GIGAWATTS FRC Team, Team Captain & Design Lead, Fort Payne, AL

August, 2020 – May, 2025

- Led 40+ students in designing, building, and competing with 125lb robots at regional and world competitions
- Mentored 100+ middle school students, fostering interest in STEM and success at state and national competitions
- Earned multiple team awards and individual awards (Impact Award, Creativity Award, Dean's List Semi-Finalist)

SKILLS AND INTERESTS

Manufacturing/Design:

- **CAD/CAM/Slicing Software:** Onshape, SolidWorks, Fusion360, Mach3, Bambu Studio, Prusa, Creality, Formlabs, Orca, Snapmaker, Dremel
- **Tools:** CNC Machining, Manual Mill and Lathe, Waterjetting, CO2 and metal laser cutting, 3D printing, Soldering, Spot Welding, Wood Shop tools, and more
- **Competition:** 3rd of 359 world wide participants in Cults3d model designing contest

Programming/Computing/Electronics:

Java, Python, HTML, CSS, C, Assembly, MATLAB

Stepper motor drivers, ESP32s, Arduinos, closed-loop feedback systems

Personal Projects (a small snapshot of some completed projects):

- **Custom clip-on roller skates**
 - Made in-house, with a manual mill, metal laser cutter, and metal bending tools.
- **Beetleweight(3lb) Combat Robot**
 - Kiwi drive robot using custom omniwheels made in-house, with metal cleats for traction in fight arena.
- **Any-Level Toolcart**
 - Electronically actuated tool cart with a 27 inch travel capable of lifting over 300 pounds repeatedly