John Yaklin

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Education

University of Illinois Urbana-Champaign   Expected December 2025
Bachelor of Science in mechanical engineering   GPA 4.0
Engineering Materials, Electronic Circuits, Thermodynamics, Fluid Dynamics, Design for Manufacturing
- Developed a feedback-controlled PWM DC motor speed controller with an Arduino board

Black Hawk College – Moline, IL   June 2021 – May 2023
Coursework for engineering Associate of Science   GPA 4.0
Statics, Dynamics, Classical Mechanics, GD&T, Electricity and Magnetism
- Applied ASME Y14 standards to create drawings and bills of materials in AutoCAD and Inventor

Experience

Courtesy Clerk, HyVee – Milan, IL   May 2024 – August 2024
- Bagged items, moved shopping carts, collected litter, and made friendly interactions with customers

Roboticist, Design Print Destroy – Urbana, IL   September 2023 – present
- Designed, built, and competed with custom 1 lb 3D printed mobile RC combat robots
- Developed a custom PCB with an ATmega328 to control motors and store diagnostics on an SD card

Team Leader, *FIRST* Tech Challenge – Bettendorf, IA   May 2018 – June 2023
- Led a team of 15 students in designing, building, programming, and testing 14 custom mobile robots
- Modeled and fabricated custom drive trains, gearboxes, arms, manipulators, and linear actuators
- Learned and applied low volume DFMA guidelines for 3D printed, sheet metal, and composite parts
- Transformed hardware team to use "fail faster" continuous improvement mindset, study technological evolution, and model problems as physical contradictions
- Analyzed sensor readings, gearbox specifications, material costs, and game strategy metrics in Excel
- Developed state machines, feedback control systems, and autonomous navigation in Java to achieve some of the world's fastest scoring speeds
- Created and maintained a library of scripts and standard parts to accelerate design and collaboration
- Scheduled redesigns, software changes, and other responsibilities within competition deadlines
- Communicated across subteams to ensure understanding and compliance with evolving game rules
- Mentored 10 teammates one-on-one in mechanical design, CAD, and mechanical assembly
- Developed and hosted STEM activities for students at underserved schools and community centers
- Authored award-winning design portfolios, presentations, and infographics in Word and PowerPoint

Skills

Mechanical Design
- Inventor, AutoCAD, Onshape, Creo, Fusion 360, KiCad EDA, MoldFlow, Cura

Programming/Analysis
- Java, Python, MATLAB, Excel, LTspice

Awards

Inspire Award – *FIRST* Tech Challenge Iowa Championship
- Recognized as the #1 *FIRST* Tech Challenge team in Iowa for 4 consecutive years