John Yaklin

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Education

University of Illinois Urbana-Champaign December 2025 (expected graduation)
Bachelor of Science in mechanical engineering GPA 4.0
Circuit Design, Engineering Materials, Design for Manufacturing, Mechanical System Dynamics
- Assembled, programmed, and tested an H-bridge motor controller with Arduino

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 (seasonal)
- Bagged items, moved shopping carts, collected litter, and provided friendly customer service

Roboticist, iRobotics – Urbana, IL September 2023 – present
- Designed, built, and tested 3D printed RC combat robots
- Optimized BLDC motor startup behavior by configuring ESC firmware
- Developed a PCB to drive motors, communicate with SPI and I2C devices, and display sensor data
- Wrote unit and integration test programs in embedded C for an AVR microcontroller on the PCB

Team Lead, *FIRST* Tech Challenge – Bettendorf, IA April 2020 – June 2023
- Led a team of 15 students in designing, building, programming, and testing 14 custom mobile robots
- Mentored 10 teammates one-on-one in mechanical design, CAD, and mechanical assembly
- Communicated across subteams to ensure understanding and compliance with evolving game rules
- Scheduled redesigns, software changes, and other tasks within competition deadlines
- Developed and hosted STEM activities for students at underserved schools and community centers
- Wrote award-winning design portfolios, presentations, and infographics in Word and PowerPoint

Roboticist, *FIRST* Tech Challenge – Bettendorf, IA May 2018 – June 2023
- Designed robotic arms, manipulators, linear actuators, and powertrains in PTC Creo and Onshape
- Fabricated hundreds of parts with 3D printing, CNC routing, sheet metal, and hand tools
- Collaborated on designs and managed versions through PTC Windchill PLM
- Implemented new design and manufacturing practices to improve part tolerances
- Engineered state machines, feedback controllers, and autonomous navigation in Java
- Documented design process, iterations, and test results in an engineering notebook

Skills

Design
- Creo, Onshape, Inventor, Solidworks, Fusion 360, AutoCAD, KiCad EDA

Programming/Analysis
- Arduino, Java, Python, embedded C, MATLAB, Excel, LTspice

Awards

Inspire Award – *FIRST* Tech Challenge Iowa Championship
- Helped robotics team earn recognition as #1 team in Iowa for 4 consecutive years