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 / 4.0
Admitted to Master of Engineering program

Black Hawk College – Moline, IL June 2021 – May 2023
Associate of Science in mechanical engineering GPA 4.0 / 4.0

Experience

TSMC, Dry Etch Equipment Engineer Intern – Phoenix, AZ May 2025 – August 2025

- Developed a remote detection system for coolant levels, preventing $25,000 / year wafer scrap
- Applied ROS, Docker, and shell scripting to create sensor testing and data visualization tools
- Deployed a troubleshooting strategy to reduce coolant evaporation by 75% and save $10,000 / year in coolant and labor costs

iRobotics, Roboticist – Urbana, IL September 2023 – present

- Designed, built, and tested a custom 3D printed bearing for combat robots
- Performed end-to-end development of printed circuit boards for motor control and data collection
- Wrote custom motion control systems in embedded C for AVR and STM32 microcontrollers

***FIRST* Tech Challenge**
Engineering Lead – Bettendorf, IA April 2020 – June 2023

- Led team of 15 in designing, building, programming, and testing 14 unique robots
- Identified bottlenecks and drove improvements to design, fabrication, and testing procedures
- Applied TRIZ (Russian theory of inventive problem solving) to create rigorous solutions

Roboticist – Bettendorf, IA May 2018 – June 2023

- Designed actuators, frames, and powertrains in PTC Creo and Onshape
- Fabricated and tested hundreds of 3D printed, sheet metal, and composite parts
- Documented design process, iterations, detail drawings, and test results in an engineering notebook

HyVee, Courtesy Clerk – Milan, IL May 2024 – August 2024 (seasonal)

- Bagged items, collected litter, and talked to people from various backgrounds

Projects

Rope climbing robot, music signal processing tools, RC car transmission, website design

Skills

Computer Aided Design

- Creo, Onshape, Inventor, AutoCAD, nTop, Moldflow

Programming / System Modeling / Software

- Python, Java, Bash, C, Arduino, MATLAB, Excel

Awards

- Helped robotics team earn recognition as #1 in state for 4 consecutive years and top 1% worldwide