John Yaklin

(309) 506-0262 | jsyaklin@gmail.com | jyaklin2@illinois.edu | linkedin.com/in/jsyaklin | jsyaklin.github.io

Objective

Multi-disciplinary engineer seeking opportunities in advanced manufacturing equipment / process R&D

Education

University of Illinois Urbana-Champaign December 2025 (expected graduation)
Bachelor of Science in mechanical engineering GPA 4.0 / 4.0

- Relevant coursework – industrial control systems, nanomanufacturing, plasma physics
- Admission 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 plasma etcher coolant level monitoring system, preventing $25K / yr wafer scrap
- Deployed troubleshooting strategy to cut coolant loss by 75%, saving $10K / yr and increasing uptime
- Applied ROS, Docker, and shell scripting to create sensor testing and data visualization tools

iRobotics, Roboticist – Urbana, IL September 2023 – present

- Designed, built, and tested a custom high-load bearing for combat robots
- Developed printed circuit boards for precision 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

- Fabricated and tested hundreds of 3D printed, sheet metal, and composite parts
- Optimized designs for record-setting <2s task cycles and <5m maintenance cycles
- Documented design process in an engineering notebook

Projects

- Developed dielectric mirror optic simulator in Python for solar energy applications
- Researched low temperature PVD processes for dielectric layers on low cost polymer substrate

Skills

Computer Aided Design

- Creo, Onshape, AutoCAD, nTop (optimization), Moldflow (injection molding), KiCad (circuit design)

Software / System Modeling

- Python, Java, Bash, Arduino, MATLAB, Excel, C (embedded system software), Git (version control)

Awards

- Helped robotics team earn #1 award in state for 4 consecutive years, top 1% worldwide