

NICHOLAS SCHLECHT

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ENGINEERING SUMMARY

Electrical and Computer Engineering student with hands-on experience in semiconductor manufacturing, embedded systems programming, and robotic automation. Proven record developing TM Flow programs, designing mechanical integration hardware, and authoring SOPs that improve lab efficiency. Seeking a co-op or full-time role at the intersection of hardware design and automation.

EDUCATION

B.S. Electrical and Computer Engineering

Apr. 2023 – Present

Oregon State University, Corvallis, OR

TECHNICAL SKILLS

Hardware & Electronics: PCB Design, Soldering (through-hole & SMD), Equipment Installation & Maintenance, Sensor Integration

Software & Programming: C++, Python, TM Flow, Arduino

Design & Modeling: SolidWorks CAD, 3D Printer Operation & Calibration, Mechanical Part Design

Tools & Productivity: Microsoft Excel / Word, Technical Documentation, SOP Development

WORK EXPERIENCE

Analog Devices, Beaverton, OR

Sep. 2025 – Nov. 2025

Engineering technician

- Authored TM Flow programs for silicon-wafer handling robots, reducing manual intervention steps by 30% across the wafer transfer workflow.
- Engineered and 3D printed custom brackets to integrate new gripper end effectors into robotic arms, eliminating up to \$2K in off the shelf adapter costs.
- Redesigned 3D printing lab layout and material staging workflow, cutting average job setup time by an estimated 25% and improving equipment utilization.
- Developed SOPs for FDM and resin 3D printers, reducing operator errors and onboarding time for new lab users.
- Validated electrical properties of robotic arms via systematic wiring and continuity testing, confirming compliance with design specifications.

United States Marine Corps, Oceanside, CA

Mar. 2020 – Aug. 2020

Professional Instructor

- Trained up to 100+ personnel in SolidWorks CAD and Arduino programming for robotics challenges, achieving 100% course completion across each cohort.
- Maintained and repaired electrical and firmware systems across a 20 printer fleet with a value of 80k, sustaining > 95% operational readiness.
- Facilitated structured discussions developing trainees' critical thinking and electromechanical troubleshooting skills.

COURSE PROJECTS

2-Axis SCARA ARM | Oregon State University

- Developed the desktop GUI for real-time robot control, providing operators with intuitive joint/position input and live status feedback.
- Configured MCU hardware components and authored technical documentation covering pin mapping, communication protocols, and integration specs.

Distance Sensor System | Oregon State University

- Collaborated in a 3-person team to design, build, and validate a functional ultrasonic distance sensor achieving $\pm 2\%$ accuracy across a 5–200 cm range.
- Authored technical specs ensuring all engineering requirements were satisfied before fabrication; soldered power-supply and switching circuitry with full continuity verification.
- Designed a CAD-modeled wiring-harness enclosure providing strain relief and component protection while maintaining debug accessibility.