

Ethan Cox

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Current Address:

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Lafayette, IN 47901

EDUCATION

Purdue University: West Lafayette, IN

Bachelor of Science in Manufacturing Engineering Technology

Purdue Polytechnic Institute, majoring in Mechatronics Engineering Technology

Graduated August 2021

TECHNICAL EXPERIENCE

- **Manufacturing:** CNC and manual mills, CNC and manual lathes, 3D printer, surface grinder, injection molding machine, vacuum forming machine, all of the manual operations that happen in a machine shop
- **Measuring:** Oscilloscope, multimeter, machinist's measuring tools, profile projector
- **Electrical:** PLC wiring and programming, microcontroller programming, lighting, batteries, digital circuitry and implementation, op-amps, stepper motors, servos, closed loop control (PID)
- **Software:** Autodesk Inventor, CATIA, Atmel Studio, NX CAM, Vericut, LabVIEW, Multisim, MATLAB
- **Programming Languages:** C, G-code, Arduino IDE, some experience with Python

WORK EXPERIENCE

Camp Challenge Indiana Inc.

May – July 2019

- Red Cross CPR and AED training (exp. June 2021)
- Counselor for campers aged 5 to 18

Greyhouse Coffee:

Barista

June 2020 – Present

Shift Manager

May 2021 – Present

- Delegating tasks
- Training new baristas
- Maintenance

Lafayette Tool and Die:

Journeyman

November 2021 – Present

- Writing CNC programs
- 3D modeling
- Creating technical drawings
- Redesigning parts for easier manufacturing
- Reverse engineering parts

PROJECTS

Accelerated Aging of Photopolymers for Los Alamos National Laboratory 2020 – 2021

- Aged test pieces printed on a Stratasys J750 inkjet 3D printer in a custom-built enclosure with UV lamps
- Tested visual and material properties of parts before and after UV exposure

“Couch Cart” Motorized Couch 2021

- Motorized a love seat with go kart parts
- Gained hands-on experience with DC motors, motor controllers, and drive systems
- Documentation: <https://jhouse.house/j-house-couch-cart/>