Joe Maloney

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Education

Bachelor of Science in Electrical Engineering — Expected May 2026

J.B. Speed School of Engineering — *University of Louisville, KY*

Skills

Schematic Capture
Embedded Development
PCB Testing/Troubleshooting
PCB Layout
Workload Management
Board Assembly/Rework

Work Experience

Forst and Associates — **May 2024 – December 2024**

Electrical Engineering Intern — *Louisville, KY*

- Developed a deep understanding of AutoCAD, finding optimizations for our workflow and creating guides for company-wide implementation
- Managed project files, creating scripts for ingesting and normalizing CAD files from other platforms, greatly increasing the speed that clients can provide updates to our teams
- Communicated with clients in-person, via email, and over the phone to ensure our designs stayed aligned with their needs
- Created electrical construction drawings with AutoCAD, researching electrical codes and industry best practices to produces quality, code-compliant designs

Olive Garden Italian Restaurant — **June 2023-Present**

Cook, To-Go Server — *Louisville, KY*

- Planned and coordinated production, packaging, and delivery of large catering orders weeks in advance
- Managed relations with guests over the phone and in person
- Handled cash and maintained accuracy
- Created a new salad making process to increase production to 100+ salads per hour

Cracker-Barrel Restaurant — **April 2020-June 2023**

Server, Cook, Dishwasher, Production Cook — *Louisville, KY & Franklin KY*

- Trained new team members in various positions
- Communicated with guests and attended to guest needs

Applied Experience

Custom Calculator

- Schematic Capture in Altium designer, implements new MagPack DC-DC converter from TI to reduce PCB footprint
- Used multi-board design features in Altium to avoid errors interfacing STM32 control/power supply board, keyboard, and OLED display driver board
- Troubleshooted and tested design with multimeter and oscilloscope to determine needed updates to new revisions

ESP32 IoT Follower/Subscriber counter

- Utilized EAGLE for schematic capture and board layout
- Built google cloud backend (Typescript) and embedded application (C++) to fetch data, reducing the need for OTA updates when adding new features for users

Embedded Electrical Design

- Schematic capture and board layout of Spartan-7 FPGA development board
- Schematic capture and board layout of small (3cm X 4cm) thermocouple thermometer
- Schematic capture, board layout and assembly of high power (90W) PWM led driver
- Built relay-based exterior lighting controller for Christmas lights with Arduino
- Built LED matrix display clock, developed application code with Platform IO (C++)

Activities & Honors

Work 30 hours per week throughout college
Eagle Scout