

# Jack Whittaker

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## Education

**University of California, Irvine – B.S. in Computer Science and Engineering** (June 2023)

## Technical Skills

**Software:** C, C++, Python (SciPy, NumPy, Matplotlib, Scikit-learn, OpenCV), Java, web frontend and backend development (Javascript, Vue, React, Flask, Express)

**Embedded Systems:** microcontrollers (ARM, ESP8266/ESP32, AVR), FreeRTOS

**Electronics:** circuit design, component selection, PCB design (Cadence OrCAD/Allegro and KiCAD), electromechanical sensors and actuators, power electronics (switching power supplies, motor and LED drivers), EMI/EMC testing and best practices, general electronic testing and troubleshooting, SMT soldering and hot air rework

**Mechanical:** mechanical design, 3D CAD, and FEA (SolidWorks), 3D printing, enclosure design and thermal management for electronics, knowledge of machining and other manufacturing processes

## Experience

|                                                  |                           |
|--------------------------------------------------|---------------------------|
| <b>Indie Semiconductor – Systems Engineer II</b> | April 2025 – Present      |
| <b>Systems and Applications Engineer</b>         | June 2023 – April 2025    |
| <b>Engineering Intern</b>                        | February 2022 – June 2023 |

Directly worked with customers (automotive Tier 1 suppliers) to optimize hardware designs, assist with hardware and firmware bringup, and prepare products for compliance testing

Designed and manufactured mixed-signal multilayer printed circuit boards and multi-board assemblies

Created functional hardware prototypes with 3D printed, CNC machined, and laser-cut parts

Performed system-level troubleshooting and failure analysis on customer returns and issue reports

Developed, debugged, and tested ARM microcontroller firmware for automotive embedded systems

Developed Python programs for test automation tasks and modern web-based GUIs for product demos

Attended Wireless Power Consortium plugfests

Wrote application notes, PCB layout guides, technical user manuals, and other product documentation

Produced product photos and 3D renderings

## Personal Projects

Designed and manufactured a specialized narrowband light source for scanning color negative photographic film and sold over 500 units to users in over 30 countries

Designed a development board for sensorless position control of brushed DC motors via current ripple sensing, using an RP2040 ARM microcontroller and analog signal conditioning circuit

Designed and built a 3D printer controller PCB and CoreXY 3D printer