

# Electrical Engineer Intern: Systems and Sensor Design

Location: Windsor, California

## About Micro-Vu

Micro-Vu is an automation company specializing in 3D measuring and robotics. Micro-Vu engineers use technologies such as 3D software, image processing, precision mechanics and motion control, lasers, tactile probes, 3D sensors, machine learning and robotics to develop state-of-the-art solutions.

Micro-Vu designs and manufactures in a highly-automated factory at its campus in Windsor, California near the Russian River. Micro-Vu was established in 1959 and is privately-held. Those who work at Micro-Vu must be highly-motivated, capable and passionate about bringing the best possible products and technologies to the market.

## Job Summary

The applicant will be responsible for embedded hardware design of PCBs for sensor and actuator control in automated machines. Tasks may include but are not limited to:

- Design and test highly integrated analog and digital circuits.
- Schematic design, layout, routing, and DFMs and DFAs of complex PCBs.
- Full lifecycle development, including specification, documentation, design, debug, and verification of products
- Design integrated opto-electromechanical devices such as cameras, lighting, and 3D sensors for measurement
- Implementation of software cores and design and debug of specialized FPGA cells.
- Implementation of low-level embedded firmware for device and peripheral control.
- Work closely with mechanical, firmware, and software engineers on design requirements and planning.

## Education

Sophomore standing or higher in Electrical or Electronics Engineering, Computer Engineering, or equivalent.

## Minimum Qualifications

- Proficiency with electronics design analysis and EDA
- Experience with HDLs and C language, embedded design patterns, and common pitfalls
- Problem-solving ability, quick learning, and attention to detail
- Ability to work independently as well as collaboratively in a team environment
- Self starter, being able to manage a project by oneself

## Preferred Qualifications

- Experience and discipline designing complex circuitry and large PCBs
- Experience with ARM-based MCUs and SOCs
- Experience with design for high speed signaling
- Experience designing PCBs and cabling for EMC
- Experience with designing power electronics
- Experience designing drives for electromechanical actuators such as brushless motors
- Understanding of modern control theory and applicable control algorithms
- Experience with USB, Ethernet, or PCI-E
- Experience and discipline in writing firmware
- Proficiency with programming, software development techniques, and version control