Mechanical Engineer Intern: Machine Design and Automation

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 automation and machine design. Tasks may include but are not limited to:

- Design precision mechanisms and structures for accuracy, performance, and manufacturability
- Design integrated opto-electromechanical devices such as cameras, lighting, and 3D sensors for measurement
- Design robotics systems and machine interfaces for automation and integration
- Design custom automation solutions for major consumer electronics suppliers
- Develop and analyze dynamic models for motion control of automated machines
- Develop and conduct studies of performance and repeatability
- Work closely with electrical, firmware, and software engineers on design requirements and planning

Education

Sophomore standing or higher in Mechanical Engineering, or equivalent.

Minimum Qualifications

- Experience and discipline designing complex components and large assemblies
- Proficiency with solid modeling techniques and CAD
- Proficiency with drawings, tolerance analysis, and GD&T
- Knowledge of CNC machining and design for manufacture
- Strong design aptitude
- 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

- Ability to develop models and perform and apply static, dynamic, control, and thermal analysis techniques
- Knowledge of casting, plastic injection molding, surface finishing, heat treatment, or other applicable manufacturing processes
- Ability to design tests and perform statistical data analyses: regression analysis, factor analysis
- Experience with designing precision mechanisms and components, including kinematic couplings
- Understanding of modern control theory and applicable control algorithms
- Understanding of basic electric and electronics principles and design elements
- Experience with design of servomechanisms and other mechatronic systems
- Proficiency with programming, software development techniques, and version control
- Knowledge of optics and optomechanical system design, including lens design
- Understanding of machine calibration processes with tools such as laser interferometers, etc.
- Aptitude in industrial design of machine covers and human interfaces for aesthetics and ergonomics