JD Union Pte. Ltd
8 Boon Lay Way, Tradehub 21, #07-06, Singapore 609964
Phone: +65 6515 6606, Fax: +65 6491 6507
Email: Joan@Jd-Union.com
Co. Reg. No.: 200515263N

Internship Description

Company: JD Union Pte. Ltd.

Location: #07-06, Tradehub 21, 8 Boon Lay Way, Singapore 609964

About us:

JD Union Pte. Ltd. is a leading distributor of photonic products in laser material processing industry. We work with major suppliers in research and development to craft tailor-made lasers for unique use case and test in own application lab. For over 10 years, we have been providing one-stop solutions for system integrators. We serve both multinational corporations and small and medium enterprises with fast service, professional repair and long-term commitment.

Internship Position 1: Motion & Vision Control System Engineer Intern

Description:

You will play an integral role in the integration of hardware and software components used in advanced laser micro-processing systems. This internship offers hands-on experience in combining motion controllers, vision systems, lasers, and automation software into cohesive, high-performance systems. You will work alongside experienced engineers to design, implement, and test complete motion and vision control platforms for industrial laser applications.

Key Focus Areas:

- Collaborate with the engineering team to integrate motion control systems, cameras, sensors, and laser components into commercial software platforms.
- Implement communication protocols such as Ethernet and RS-232 for system-wide interoperability.
- Conduct experiments and perform system calibrations.
- Troubleshoot integration issues across software and hardware interfaces.
- Participate in team meetings and tradeshows
- Document research findings and present results to the team member and customers

Requirements:

- Currently pursuing a Bachelor’s degree in Electrical Engineering, Computer Engineering Mechatronics, Robotics, Mechanical Engineering, Computer Science, or related field
- Understanding of motion control and vision processing concepts
- Proficiency in programming languages such as C#, C++ or others
- Experience with lasers, galvanometer scanners, and multi-axis stages is a plus
- Excellent problem-solving skills and attention to detail
- Strong communication, hands-on and teamwork abilities

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Internship Position 2: Laser Micro-Processing Application Engineer Intern

Description:

You will explore and optimize laser-material interaction processes using state-of-the-art laser and motion systems in our in-house application lab. You will conduct hands-on experiments and assist in developing application solutions for industrial marking, engraving, cutting, welding and other laser-based processes.

Key Focus Areas:

- Conduct experiments on laser-material interaction using various laser sources.
- Investigate laser processing parameters (e.g., power, speed, frequency, focal position) for different materials and applications.
- Analyse results using optical inspection tools such as microscopes, and vision systems.
- Optimize laser process quality based on surface finish, depth, edge quality, and consistency.
- Assist in preparing technical reports, application notes, and presentation materials
- Support the engineering team in customer sample evaluations and prototype development.
- Participate in team meetings and tradeshows

Requirements:

- Currently pursuing a Bachelor's degree in engineering, physics, or related fields.
- Strong interest in laser technology, materials processing, or applied research
- Basic understanding of laser principles, optics, and material properties is an advantage.
- Experience with lasers, galvanometer scanners, and multi-axis stages is a plus
- Excellent problem-solving skills and attention to detail
- Strong communication, hands-on and teamwork abilities

Internship Position 3: Software & Digital Solutions Engineer Intern

Description:

We are seeking Software & Digital Solutions Engineer Interns experienced in programming, primarily C#, to join our growing team. You'll be part of various cutting-edge projects—from custom industrial machine HMI development and hardware implementation to complex algorithms for 2D/3D geometry and trajectory manipulation. You will also be involved in other frontend developments, ERP business management software systems and Agentic-AI solutions.

Key Focus Areas:

- Industrial HMI Development (WPF/MVVM, Industry 4.0) - build intuitive interfaces and integrate with industrial protocols.
- Hardware Implementation - incorporate positioning systems, lasers, cameras, sensors, and other devices into unified solutions.
- Frontend Website and Mobile Application Development.
- ERP System Establishment and Utilization.
- Integrate Agentic-AI solutions.
- Participate in team meetings and tradeshows
- Document research findings and present results to the team member and customers.

Requirements:

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- Currently pursuing a Bachelor's degree in Computer Science, Computer Engineering, Electrical Engineering, or related field
- Solid Programming Background - proficiency in C#
- Experience with lasers, galvanometer scanners, and multi-axis stages is a plus
- Excellent problem-solving skills and attention to detail
- Strong communication, hands-on and teamwork abilities

How to apply:

Besides submitting through the school portal, interested candidates are encouraged to submit their resume and academic transcripts directly to info@jd-union.com with the subject line "Intern Application - [Position Name] - [Your Name]".

JD Union is an equal opportunity employer. We celebrate diversity and are committed to creating an inclusive environment for all employees.