



An ATN Services Company

Professional Industrial Consultants

27600 Northwestern Highway ♦ Suite 260 ♦ Southfield, Michigan 48034
Office: 248.799.9601 ♦ Fax: 248.799.9607 ♦ Website: www.proindcon.com

SR. AUTOMATION ENGINEER MACHINE VISION 21-431

JOB DESCRIPTION

Will be involved in creating in-house machine vision applications for turnkey project delivery. Will provides productized solutions as well as custom solution development and deployment of a machine vision solutions for clients across various industries. The Machine Vision Engineer will be involved in all aspects of the project delivery, including front-end programming on Graphical User Interfaces (GUI), back-end programming of inspection files, creation of machine vision algorithms, and selection of the various hardware components and integration requirements. The role will also include the understanding and implementation for various cameras, lenses, lights, and Industrial PC's and will work with the automation team for passing the information from the Vision Systems back to PLC's, Robots, or OEM equipment.

- This candidate will also work on leading edge Artificial Intelligence (AI) Vision Algorithms and Platforms for use in the manufacturing, packaging, automotive, and logistics industries. Helping in the transition of our client's legacy systems to the latest and greatest in machine vision.
- The machine vision lead engineer will perform additional duties supporting the sales and business development team in solution design and proposal costings. The machine vision lead will also be responsible for providing mentorship and training.
- Manage, lead, and take ownership of machine vision system design responsibilities on custom industrial automation solution projects.
- Conceptualize and design custom industrial automation machine vision systems, including development and confirmation of technical specifications and bills of material.
- Support conceptual design planning and creation of machine vision systems. Provide oversight of equipment assessment, ordering, and verification that final system hardware and software meet customer requirements.
- Ensure that component / system designs meet the specifications for the proposed solutions and follow the industry and Company standards for development.
- Oversee and support development, testing, and installation activities to ensure machine vision systems conform to engineering design, meet customer requirements and design specifications, and are production ready.
- Serve as the engineering department's primary point of contact on machine vision system design and technical matters for assigned projects.
- Provide guidance and direction in technical design and risk evaluation as part of the solution design team.
- Act as the escalation point for both internal and customer teams as it pertains to machine vision system issues which arise during the build, installation, or warranty of a custom automated system.
- Ensure commitments on projects are met including schedule, function, performance, serviceability, and appearance.
- Support and collaborate with engineering project management and delivery teams in procurement of all required components within design.
- Support and guide resolution activities for issues that arise during the equipment build/install/testing activities.
- Develop custom Machine Vision applications utilizing various Object-oriented programming language.
- Work with Machine Vision Systems or Bar Code Reading systems in industrial automation or logistics environments.
- Program and Support existing vision systems deployed at client sites.
- Ability to install/integrate machine vision hardware components to new and OEM equipment.
- Conduct user requirements definition and project scope evaluation.
- Development of functional and detailed design documents.
- Interaction with the Research & Development Group on defining the requirements for machine vision integrations into new company products; specifically, Robotics integrations and the use of AI assisted inspections for new applications.
- Demonstrated ability to independently complete technical tasks once trained.
- Ability to multitask and work under pressure situations demonstrating a flexible work style.
- Strong analytical and problem-solving skills.
- Ability to communicate and collaborate with a team.
- Work with the Systems Engineers and Technology Specialists to develop inhouse assessments and testing procedures.

- ♦ OVERALL PROGRAM / PROJECT MANAGEMENT
- ♦ MASTER PROGRAM / PROJECT SCHEDULING
- ♦ TECHNICAL SUPPORT / CONTINUOUS IMPROVEMENT
- ♦ ENGINEERING / FABRICATION / TESTING / LOGISTICS
- ♦ INSTALLATION / QUALITY / INITIAL ACCEPTANCE
- ♦ COMMISSIONING / LAUNCH / FINAL ACCEPTANCE



- ♦ STAMPING / PRESSES / MILLS ♦
- ♦ BODY SHOP TOOLING / AUTOMATION ♦
- ♦ PAINT FINISHING SYSTEMS ♦
- ♦ GENERAL ASSEMBLY TOOLING ♦
- ♦ MATERIAL HANDLING / CONVEYORS ♦
- ♦ PLACEMENT SERVICES ♦



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- Support the conceptual design and costing of proposed solutions for sales opportunities and support sales technical meetings as needed.
- Provide internal training and upskilling for Systems Engineers and Automation Specialists. Update and manage the training materials and tools for use by the engineers.
- Meet with vendors to confirm solution requirements and component selection. Stay up to date on new / latest technologies for control systems, including attending and supporting industry conferences and networking events.
- Act as the escalation point for any machine vision system issues which arise during the build, installation, or warranty of a system. The MV Lead will work and guide the Systems Engineers and Field Technicians when required.
- Serve as the company's first point of contact for the customer on machine vision matters for assigned projects.
- Develop, as required, appropriate on-site modifications/optimizations machine vision systems to deliver satisfactory solution performance, while remaining within the initially designed solution specifications.
- Analyze existing development procedures and suggest improvements.
- Create hardware and software design documents for front end and back end designs.
- Support the implementation and testing of custom machine vision systems.
- Maintain technical project files and drawing sets.
- Publish engineering reports documenting design details for white papers and marketing.
- Provide consultation or training on topics such as Machine Vision.

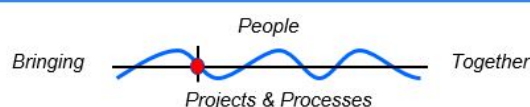
REQUIREMENTS

- Bachelor's Degree in Electrical, Mechanical, Industrial or Computer Engineering from an accredited institution.
- 5+ years of Machine Vision System Development and Integration to manufacturing processes.
- AIA CVP-Basic Certification
- Experience with existing Machine Vision Platforms such as (Cognex, Keyence, Halcon or OpenCV);
- Experience implementing projects in a regulated/validated environment is desired.
- Capability of programming in C#, C++, or Python.
- Advanced Vision Experience: AI Neural Networks, 3D Imaging, Metrology Inspections, etc.
- Availability to work evening and weekend hours or varying work patterns depending on project needs.
- Availability to travel domestically and internationally.
- Possession of a valid driver's license that is in good standing.
- Basic understanding of common machine vision principles, like optics

Preferred Skills:

- AIA CVP-Advanced Certification
- Cognex ViDi Experience
- TensorFlow Development Experience
- Data base user interface and query software (e.g., Oracle software, Structured query language SQL)

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