

JOB OPENINGS

Full-Time

Algorithm Engineer (Ann Arbor, MI)

Job Description: Responsibilities: Develop the next generation of algorithms for semiconductor device and thin film metrology. The position requires a proven innovative track record in the related fields of algorithm development, statistical data analysis and signal processing, image analysis and machine learning. The candidate should have a background in engineering/math/physics and be comfortable and conversant in a range of disciplines from optics, information and noise analysis, solving optimization problems (forward and inverse). The Algorithms Scientist will produce mathematical formulations, develop modeling tools, and perform data analysis and capability predictions on a variety of metrology technologies. The role will closely interface with other members of Advanced Development, Engineering, Algorithm and Application teams. The candidate should demonstrate ability to develop complex data analysis algorithms, software codes that can be used by others, understanding of experimental data analysis, and ability to guide others. ** Please note we are looking to fill multiple requisitions **Qualifications: Education or experience must include: Designing, developing, modifying and diagnosing complex algorithms, utilizing C#, C++, R, Python, Matlab or other tools and languages; Ability to invent, develop and implement new algorithms and ideas; Statistical analysis, modeling and optimization methods; Experience with machine learning, Python, Tensorflow; Signal and image processing, computer vision and machine learning; Hands-on experience in object-oriented and functional programming; Hands-on experience with products such as JMP, R, Python, Matlab is a plus; Excellent written and verbal communication skills. Ability to work both independently and in a team environment. Semiconductor optical metrology experience preferred. Minimum Qualifications: **Majors:** PhD in Computer Science, Electrical and Computer Engineering, or Physics and Mathematics and other related fields. Job IDs: **119262, 119266, 119263, 119637, 119944, 119950, 120011, 120447**

Algorithm Engineer (Milpitas, CA)

Job Description: We are looking for a candidate that Design, development and implementation of cutting edge machine learning, deep learning, computer vision and image processing algorithms. Write robust production quality code. Develop end to end solutions that are holistic taking into account the system, imaging pipeline, the user experience and the end application requirement. Rapid prototyping and validation of new machine learning and image processing algorithms. Work in a highly cross functional organization to participate/drive systems integration and testing of algorithms. Identify bottlenecks and optimize algorithm implementation or process-flow for improved performance. **Majors:** PhD or MS degree. Job ID: **120046**

Applications Development Engineer (Milpitas, CA)

Job Description: Our Applications Development Responsible for supporting KLA's reticle inspection products. Key Responsibilities include - Product Development: Characterization of next generation state-of-the art semiconductor wafer inspection products. This includes designing test plans, collecting data, performing analysis, publishing results and recommendations in the form of applications notes, best known methods. Customer support: Product value demonstration during beta testing, Head-to-Heads (H2H) and tools in the ramp phase, thereby enabling product penetration/adoption at customer facilities. This includes investigating semiconductor manufacturing yield issues and providing inspection solutions; creating & sharing product value statements and use-cases with engineering, marketing and sales groups; training customers and other applications engineers. Use-case Demos: Conduct new tool demonstrations to showcase tool performance and develop use cases to help drive tool sales. Worldwide travel (on average 10-20%) is required to support inspection products at customer sites. **Majors:** Doctorate (Academic) OR Master's Level Degree with at least 2 years of experience. Job ID: **119858**

Business Process Analyst (Milpitas, CA)

Job Description: The candidate will be responsible for improving data quality and analytics from our IDeliver! program. This program manages Ship to Acceptance process for all products shipped to our customers. Each product shipment requires a thorough plan, comprising of a clear statement of work and ownership across product delivery and execution. Quality of the IDeliver! plan and all delays during plan execution are captured in this system as non-conformances. These non-conformances provide a tremendous source of corrective learning and continuous improvement that help KLA improve our performance and customer experience. **Majors:** Master's Level Degree OR Bachelor's Level Degree with 1-year experience in data science discipline. Job ID: **120128**

Customer Support Engineer (Albuquerque, NM)

Job Description: Primarily responsible for the Customer Engineer is to support service activities associated with modifying, troubleshooting, diagnosing and repairing of highly complex capital equipment at customer sites. Represent the company to the customer and assume accountability for customer satisfaction with service. Assure operational quality of system equipment. Coordinate actions with customers to minimize down time. Aid Installation Engineers in resolving problems. Evaluate, analyze, diagnose and troubleshoot technical equipment problems via telephone or at customer site. Ensure equipment enhances customer production. Repair and modify equipment at customer facility. Evaluate equipment to determine type and extend of problem. Repair board problems which can be performed using standard procedures as well as system level problems which have multiple causes and no standard procedures exist. Repair of system level problems are based on CSE's technical knowledge, education and training, board problems vs. system level problems are split 50/50. In analyzing and diagnosing equipment problems, CSE's may access and determine problem exists in customer process such as chemical leaks or contamination and as a result may recommend shutdown of customer fab due to unsafe conditions. Provide guidance and technical assistance to Installation Engineer on installations at customer sites or on installing/dismantling demonstration machines. Also provide guidance to less senior CSE's. Travel by car or airplane to customer facilities. Conduct customer orientation on all aspects of equipment user applications. Cross train and assist other field service engineers as appropriate. Prepare reports on customer support activity and provides documentation to engineering, marketing and sales on reoccurring problems. Make recommendations for improvements. **Majors:** AA or BS in electronics or related field. Job ID: **119828**



Electrical Design Engineer (Ann Arbor, MI)

Job Description: Designs electrical parts, modules and subsystems to support the design of whole systems. Be responsible for the complete design process, including requirements specification, feasibility studies, cost and scheduling. Conducting analysis, such as circuit, timing, thermal/cooling, AC/DC power design, electrical loads and FPGA modeling, conceptual and detailed design using design tools (i.e. OrCAD, PSpice, Xilinx/Altera FPGA /EPLD development systems, etc...), detailed drawings, design review presentations, procurement of prototype parts, system integration, prototype testing, and handoff to manufacturing. These tasks will require working with other engineering groups such as ME, OE, SW, systems and manufacturing engineers to ensure flawless integration and test at the subsystem and system level, and develop required supporting documentation, such as assembly and test procedures, and service manuals. Work closely with and manages suppliers to ensure all design requirements are specified and achieved and address and resolve product issues thru the product phases. Have strong leadership, communication and problem-solving skills. **Majors:** PhD or bachelor's Level Degree with at least 1 years of experience. OR Master's Level Degree. Job IDs: **120319**

Laser Sustained Plasma Modeling Research Scientist (Milpitas, CA)

Job Description: The successful candidate will provide key information to the other members of the technology team and to product development groups needed to produce inspection systems with unprecedented performance. This work requires both the ability to work independently and to work in close collaboration people from a range of organizations. Model the operation of laser sustained plasma light sources. Collaborate others to develop plans and then execute validation and benchmarking of modeling results in new parameter regimes. Collaborate with the other R&D and engineering teams to define modeling plans that explore the potential design space for future products. Collaborate with the other R&D and engineering teams to model existing development hardware to speed diagnosis of operating characteristics. **Majors:** Doctorate (Academic) OR Master's Level Degree with at least 2 years of experience. OR Bachelor's Level Degree with at least 3 years of experience. Job ID: **120309**

Packaging Engineer (Milpitas, CA)

Job Description: Candidate will work in a small core team and share the responsibilities for day- to-day operations of the packaging department. Create shipping container solutions based on analyzing engineering drawings, specifications and/or product samples to determine physical characteristics of item and identify special handling and safety requirements. Receive broad goals and objectives from the Program Manager based on business and project needs. He or she must perform tasks with minimal direction and supervision and employ basic project management practices to specific time-related deliverables. Advise internal customers or suppliers on efficient packaging procedures, packaging materials, and utilization of protective packaging systems. **Majors:** BS or MS in Packaging Engineer. Job ID: **119276**

Research Scientist (Ann Arbor, MI)

Job Description: Responsibilities: In this position, you will have several responsibilities. First, work on a team to develop new models for lithography and etch patterning processing and to develop numerical algorithms to implement these models in commercial software. Second, work with customers to develop and to support new applications for computational patterning, working both on mask layout and fab use-cases. Potential applications include rigorous OPC (optical proximity correction), weak point analysis, and control and optimization of new patterning schemes. Third, work with advanced algorithms to greatly accelerate existing models on parallel compute and GPU platforms. Finally, work with advanced data analysis to determine model parameters by fitting to experimental datasets, which will include image-based metrology such as SEM images. Qualifications: A proven innovative track record in the related fields of algorithm development, computational physics, and machine learning. Background in computational physics or applied mathematics solving problems in areas such as fluid mechanics, imaging science, Maxwell equations, plasma chemistry and dynamics, surface evolution, and inverse problems. Or, a background in machine learning algorithms, such as machine vision and neural networks. With the following experiences/Skills: Designing, developing, modifying and diagnosing complex algorithms. Ability to invent, develop and implement new algorithms and ideas. Hands-on experience in object-oriented and functional programming. Hands-on experience with products such as Matlab, Python/TensorFlow is a plus. Excellent written and verbal communication skills. Ability to work both independently and in a team environment. **Majors:** PhD or MS with at least 2 years of experience OR BS with at least 3 years of experience. Job IDs: **119639**

Software Engineer (Ann Arbor, MI)

Job Description: Responsibilities: Be able to conduct software development activities using C++/C#, Managed C++, MFC, ATL, COM, .NET in Windows 32/64 bit environment. Participate in all stages of software development including deployment/trouble shooting at customer sites (for current products). Take ownership of assigned design and development tasks for current and future generation of products. Work in a global environment to Interact with multi-site team members (India, Singapore and USA) during software product life cycle for requirement analysis, design, coding, integration and testing. Work with hardware and systems/application groups to understand system requirements and map them to a software design. Travel for customer support and training on a needed basis. **Majors:** BS with at least 1 years of experience. OR MS. Job IDs: **120325, 120426, 120616**

Software Engineer (Milpitas, CA)

Job Description: We are looking for a candidate to develop real-time software to support development of the next generation reticle inspection tools. Collaborate with existing staff to drive requirements specifications, define algorithm details, complete C++ software design, code and test software at the bench level, deploy software on next gen inspection machines, debug and characterize performance, support integration of Alpha and Beta systems and Beta testing at customer sites. These tasks will require working with other engineering groups such as Optics engineers, Systems engineers and Manufacturing and Service engineers to ensure flawless integration and test at the subsystem and system level. Address and resolve product issues thru the product phases. Cross-train with current staff to learn details of existing SW/HW subsystems involving precision motion control, beam pointing control, optics positioning control and vibration isolation. **Majors:** MS or BS in Electrical Engineering or Computer Science preferred. Job IDs: **119216, 119833, 120266**

Software Engineer (Data Science/ML Cloud Platform) (Ann Arbor, MI)

Job Description: Maintain and enhance standard architecture for Realtime data for inference. Contribute to development of standard architecture for model serving. Ideal system should be standardized and loosely coupled. Easily pluggable into production systems. Contribute to hardware roadmap for cost effective production ML systems. Define and own all metrics (coverage, scale, latency, reliability etc.) for serving area. Create tools and multi-site deployment strategy. Apply it for deployable from all workstreams. Work with h/w team and IT to spec and scale solutions. Design VM and Container strategies best suited for hybrid cloud. Desired: Cloud, Kubernetes, Docker, RAPIDS, CuDF, CuML. **Majors:** Bachelor's Level Degree. Job ID: **120429, 120436, 120436**

UI Software Engineer (Ann Arbor, MI)

Job Description: We are looking for a software engineer with experience in the Microsoft Visual Studio C#/C++, and Qt development environment. The candidate must be skilled in modern development practices, including object-oriented design, design patterns, and automated unit testing. Knowledge of software architecture fundamentals is also required. The software engineer will be a technical contributor on our lithography and etch patterning commercial software development team working on challenging problems in the semiconductor production domain. The product development includes new product releases as well as maintenance releases in the areas of mathematical data analysis algorithms, graphical data representation and user interfaces, database storage and management, real-time data processing and others. Key attributes of the successful candidate are being a self-starter, problem solver, collaborative team player, and high productivity contributor. **Majors:** BS/BA in computer science, computer engineering or similar field. Job ID: **120276**

Internships

Algorithm Engineering Intern (Milpitas, CA)

Job Description: In this position you will Prototype and develop cutting edge deep learning, computer vision and image processing algorithms to solve complex object detection, classification, segmentation and pattern recognition problems. Rapid prototyping and validation of new machine learning and image processing algorithms.

Majors: Some College. Job IDs: **119705**

Analog Electronics Intern (Milpitas, CA)

Job Description: KLA is seeking a talented and motivated individual for an internship position within the Electrical Engineering group. Successful candidate will have the opportunity to work in the laboratory on design characterization and test of prototype electronics boards. Our designs employ highly complex, cutting edge, low noise analog/mixed signal circuits, which are enabling our leading technology in the advancing semiconductor industry. The candidate needs to have a strong knowledge of low noise linear analog circuitry, characteristics of analog components, and be proficient with the use of electronics laboratory equipment. The candidate is expected to be self-driven, independent and to possess excellent oral and written communication skills to successfully collaborate with our accomplished electronics engineers.

Majors: PhD or master's degree in Electrical Engineering or Physics or bachelor's degree in Electrical Engineering or Physics. Job IDs: **120038**

Applications Development Internship (Milpitas, CA)

Job Description: Develop innovative concepts and models of sensors and sensor subsystems into practical designs. Responsible for testing and analysis on products and designs during initial phases of the development process. Coordinates and performs root cause analysis to solve issues. Interfaces with technologists, development and marketing to define and optimize system performance and resolve performance problems. **Majors:** B.Sc. degree in Physics, Materials Science, Electrical Engineering, or related field. Experience with one or more of the following: thin films, thick films, MEMS, sensors, electronics packaging. Job ID: **119916**

Application Software and Data Science Intern (Milpitas, CA)

Job Description: We are looking for interns who are curious, who want to be entrusted with real responsibility and embrace the opportunity to write code that will ship. Our software drives ultra-high-speed wafer inspection and review systems that includes user interface, machine control, clustered image computer, machine learning and complex image processing algorithms. You'll be a member of the engineering team and learn from our incredible engineers while making a measurable impact.

Majors: Currently pursuing a BS, MS, or PhD in Computer Science or a related field Job IDs: **119711**

Electrical Intern (Milpitas, CA)

Job Description: Develop an embedded image acquisition circuitry including digital, FPGA, board design, prototyping and testing. Precision industrial camera fundamental knowledge. Serial communications such as RS232, Ethernet, USB, firewire, etc. Machine Vision system knowledge. Image processing algorithm fundamentals. Previous projects relevant to build or integrate an embedded evaluation electronic environment using microprocessor, FPGA, Verilog, simulations, communications, etc. **Majors:** Some College. Job ID: **119985**

Industrial Engineering Intern (Westwood, MA)

Job Description: Assist U.S. Ops & Service Manufacturing teams with production floor efficiency and Lean implementation. A variety of micro-projects and tasks ranging from procedural improvements, production flow, bench optimization, and overall Lean implementation. Could involve manufacturing cell relocation, physical plant changes, flow modification, procedures, group training and organization, process audits, etc. **Majors:** Working towards: Bachelor's or master's degree in Industrial Engineering or other technical area. Job ID: **119908**

Marketing Intern (Milpitas, CA)

Job Description: Job responsibilities of the Communications Intern include: Technical writing, editing and other content development in support of products and campaigns, such as editorials, technical papers, field advisories, product brochures and application notes. Social media and web writing and editing, both technical and non-technical. Development of original promotional content for social media. Ability to commit between 20-35 hours on the job. **Majors:** Currently pursuing a degree in marketing, communications, engineering or physical science. Job ID: **119244**

Mechanical Engineering Intern (Milpitas, CA)

Job Description: Precision Mechanical Design Challenge: Hack an existing tool to increase operational capabilities and precision. This may include mechanical design, mechatronic design, servo control tuning, feedback sensors selection, and actuator selection. Work with outside supplier to understand their requirements, the limitations of their existing tool and the needed improvements in functionality and precision. Learn and implement precision mechanical design by working with KLA experts. Identify opportunities for increasing precision and develop innovative concepts and models to accomplish these improvements. Document improvement concepts and implement as time permits. **Majors:** Pursuing BS or MS degree in Mechanical Engineering. Minimum 3-year completion of BS degree. Job ID: **120136**

Optical System Engineer Intern (Milpitas, CA)

Job Description: Responsible for designing, building and troubleshooting optical proof-of-concept and metrology benches for optical inspection systems for semiconductor industry. The ideal candidate has background in areas of physics or EE, preferably in areas of physical optics (optical metrology, microscopy, interferometry, lasers). Practical experience with automated data acquisition is highly desirable. **Majors:** Some College. Job ID: **120217**



Software Engineering Intern (Milpitas, CA)

Job Description: The Surfscan-ADE division is hiring a software engineer intern to join the software development team at Milpitas to work on the family of Surfscan Inspection tools that are the best-in-class semiconductor inspection equipment in the industry. The role requires design and development of Software to run on cutting edge inspections tools. Candidate should be able to gather requirements from Systems Engineers, design and develop code that meets required performance specifications. The candidate should have solid fundamentals in math and be able to analyze large sets of data, perform modeling, design and develop highly optimized software that runs reliably in a fully automated production environment. **Job Duties:** Responsible for software development using Python or C++, C#. Aptitude to learn JMP and rewrite JMP Scripts in Python or C++/C#. Participate in all stages of software development including deployment. **Majors:** Master's or bachelor's degree in Computer science / Electronics / Electrical or equivalent field in process. Job ID: **119938**

Software Intern (Knoxville, TN)

Job Description: Software Testing with Basic Computer Skills. **Major:** Some College. Job IDs: **120566, 120567**

Systems Engineering/Data Analytics Intern (Milpitas, CA)

Job Description: This exciting position will enable you to interact with a wide variety of Engineers and KLA System data, with a focus on delivering an improved user and customer experience across KLA's global installed base of Systems. The intern will learn how to work with real-world data from industrial equipment, and how it can be used to improve the productivity and maintenance of those machines. The intern will learn how to work with engineers and future users to understand and document requirements for software and data analysis applications, to ensure that the final products will meet the user needs. This project offers the opportunity to implement tools that will save users time and make more accurate and more proactive service decisions on equipment running in leading-edge semiconductor fabs. The intern will have the opportunity to work on both the implementation of their own work, as well as influence the framework for others to use in the future and will have the opportunity to see the results of their work during the project timeframe. The work for this project could also potentially continue a remote basis after the intern returns to campus. This position is responsible for: Working with software, hardware, product support, application and marketing groups to understand and document product requirements. Working with statistical structures: JMP, OriginLab, Matlab; to derive a statistical decision-making point. Design, development and testing of data analysis and visualization applications in Python. Developing user training materials. Working in a global environment to interact with multi-site team members (India, Singapore, Europe, Israel and USA). Traveling to customer sites on a needed basis for deployment / troubleshooting. **Majors:** At least 3 years of college. Job ID: **119739**

HOW TO APPLY:

It's always best to apply online at careers.kla.com, so that the specific recruiter/hiring manager of the position you're interested in receives your resume. However, if you don't see the position(s) you're interested in online, please email your resume to ur@kla.com as we continually have positions opening throughout the season. Join us. Our future—and yours—is getting brighter.

Company Information:

Who are we? We research, develop, and manufacture the world's most advanced inspection and measurement equipment for the semiconductor and nanoelectronics industries. We enable the digital age by pushing the boundaries of technology, creating tools capable of finding defects smaller than a wavelength of visible light. We create smarter processes so that technology leaders can manufacture high-performance chips—the kind in that phone in your pocket, the tablet on your desk and nearly every electronic device you own—faster and better. We're passionate about creating solutions that drive progress and help people do what wouldn't be possible without us.