

Software Engineer

Varioscale is a technology leader in cybersecurity hardware research. Our R&D teardown laboratory generates multiple terabyte datasets of integrated circuits (IC) which are analyzed using a high-performance computer. As a member of our research team, you will contribute to the software development of state-of-the-art IC analysis at an unprecedented scale.

As a member of the Varioscale engineering team, you will also contribute to our commercial products used by the world's leading semiconductor manufacturers for failure analysis, design debug, and production yield. Our core engineering technology covers laser chemical etching of IC, precision 3D mechanical milling of silicon and packaging material, and infrared and visible light based interferometric measurements.

The candidate will be part of a small, multidisciplinary team of chemical, electrical, and mechanical engineers and scientists, and must be able to communicate effectively through verbal and written documentation, accomplish goals in a matrix team environment, and be an effective problem solver at customer sites.

Responsibilities:

Varioscale manufactures semiconductor capital equipment (Systems) of various complexity from a desktop laboratory metrology microscope (VarioMetric) to a laser chemical etching and deposition system (VarioEdit). Customized software is a critical component to the functionality and laboratory user experience.

Varioscale conducts cyber-security hardware research developing software for high performance computer analysis of large scale (up to 1 petabyte) IC image datasets.

The duties of this position include:

- Design and implement GUI tools for large-scale spatial-data acquisition, analysis and visualization.
- Implement user interface tools to assess integrated circuit structure and sample preparation quality.
- Support microscopists and data analysis software engineers in designing and improving data acquisition and analysis workflows.

Qualifications:

- A computer science, computer engineering, or physics degree
- Knowledge and experience programming in C++
- Experience with setting up C++ build environments with CMake on Windows systems
- Experience with the Qt 5 UI framework

Desirable experience:

- Familiarity with implementing algorithms to take advantage of high-performance computing clusters for massively parallel data processing

- Experience writing libraries and applications using modern C++17 programming paradigms.
- Familiarity with the Visualization Toolkit (VTK) library, PostgreSQL, Doxygen and Python 3.6 or later

To apply send your resume and cover letter to jobs@varioscale.com. Reference SE2021 in the subject line.

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