

. Software Architect

Overview:

OPTECS is a leading company based in Rotterdam, The Netherlands, specializing in the application of Artificial Intelligence (AI) and computer science technology in mineral processing. Our vision is to develop innovative and efficient solutions for the mining industry, optimizing the extraction, processing, and utilization of minerals. We are always striving to improve our solutions and technology with cutting-edge research and development. We collaborate with academic institutions, industry partners, and government agencies to ensure the quality and relevance of our work. We are passionate about our mission and we are committed to delivering value to our customers and stakeholders.

Key Responsibilities:

- **Architectural Design:**
 - Lead the design of a distributed architecture using efficient Data Distribution Service (DDS) implementation for real-time communication between system nodes, incorporating auto-discovery and lifecycle management.
 - Design node-based systems with analyzers, visualizers, AI processors, controllers, and other types of components described in the architecture design.
 - Ensure the design leverages QoS (Quality of Service) settings, optimized networking, and real-time data flows.
- **Legacy System Migration:**
 - Oversee the migration of the current Python based solution to the new system and conduct testing. Ensure backward compatibility where needed, while improving performance and scalability.
 - Facilitate the integration of software structures and approaches for current systems into the new unified software platform which is flexible and scalable to host variety of different control scenarios and use cases.
- **Component-Based Design:**

- Define base classes, lifecycle management, and message-passing protocols for system components such as analyzers, controllers, optimizers, and AI processors.
- Manage the creation of templated components and enforce coding standards for adding new components using decorators and system APIs.
- **Data Management & Access Control:**
 - Design and manage the integration of the proper backend data management systems for data storage, parameter storage and system state management, ensuring secure access control.
 - Collaborate with the engineering team to develop and integrate various modules and components necessary for control schemes and efficient access control systems to ensure data integrity and node permissions.
- **Network Management:**
 - Implement efficient messaging protocols leveraging DDS for efficient real-time communication, managing topics, services, actions, and messages to avoid network congestion.

Key Requirements:

- **Experience:**
 - Experience in software architecture, with a focus on distributed systems, control systems, or real-time systems.
 - An understanding of DDS, and QoS concepts.
 - Previous experience in control systems design and implementation, mining, milling control systems, or related industrial control systems, AI and deep learning approaches and applications, would be a strong plus.
 - Prior experience with industrial sensors
- **Technical Skills:**
 - Expertise in Python and C++ for industrial applications.
 - Proficient in database management systems.
- **Soft Skills:**
 - Leadership and collaboration skills to coordinate between technical and non-technical stakeholders.
 - Communication skills to explain complex systems and architectures to team members.

Information:

If you believe your profile could be a good match to this Software Architect position, apply now!

Sent your CV at admin@optecs.nl .

After the screening of all the CVs received, we will contact the candidates who meet the requirements of the job to arrange an interview. All applications are considered strictly confidential.