

JOB TITLE

Toolchain Engineer – Software Design Environment for Lean Processing

SHORT DESCRIPTION

The Swedish brand of microprocessors, Imsys, is promoting its lean processing solutions for Machine Learning and Digital Signal Processing. It is an exciting time at Imsys as we develop innovative products based on our proven processor technology. We are looking forward to welcoming talented toolchain engineers to our team. Our design tools provide bleeding-edge development experience for a high-level design process and highly optimized on-demand performance with Imsys lean solutions. This is a unique opportunity for you to contribute to the design and implementation of game-changing products built on state-of-the-art technologies like ONNX, LLVM, Eclipse, and the Imsys lean processor core. Do not hesitate to check out more details if you are willing to undertake a wide array of challenges in developing the Imsys software design environment.

POST

As a toolchain engineer at Imsys, you work on high-impact projects with tight schedule. You have a good overview of high-level design tools, compiler technology, and computer architectures. You possess communication and problem-solving skills to actively contribute to tasks related to the Imsys software design environment throughout its lifecycle. You develop state-of-the-art development tools in C++ and connect them to user-friendly graphical interfaces in Python and Java. You also have a fine understanding of computer architectures to discuss design questions of instruction set architectures and are interested in the intricate operation of a processor core. Being a responsible member of the Imsys team exercises your capability to plan your tasks and deliver results within estimated boundaries.

Imsys is a Swedish semiconductor SME designing processors and software ecosystem supporting them. The Imsys lean processor solutions provide a flexible, low-cost, and energy-efficient platform thanks to a microprogrammable microarchitecture implemented in the hardware core. The company has a history as supplier of networked embedded platforms with specialized features and participant of international research projects in collaboration with several industrial and academic partners. We do all this with a small group of talents built around a core of software engineers, data scientists, hardware engineers, and experienced managers. The next generation Imsys lean processor and software ecosystem enables establishing the company in the market of machine learning and signal processing solutions.

As an Imsys toolchain engineer, you are in the forefront of providing a great experience to our customers through developing an effective software design environment. Your work also affects every piece of the Imsys software platform and applications. The main line of current activities target implementing the design environment and compilation toolchain for the forthcoming Imsys processor. Continuous interaction among different development departments make it possible to improve our products. You can learn about and influence the development of the microarchitecture of Imsys processors as well as details of system software. We believe that being open and informed about new ideas and the state-of-the-art in our field are key ingredients of success, thus you may join various software development activities and contribute to research projects beyond everyday product development.

You can join our small but energetic team in the north of Stockholm area. We provide you with flexible working hours and competitive salary. Our office also offers you a stimulating environment with an interdisciplinary group of experts as well as the possibility to work on industrially relevant applications and be part of a special story of an SME challenging the status quo of the semiconductor industry.

You should join the Imsys team as toolchain engineer if

- You are ready to contribute to the design and development of the Imsys software design environment,
- You have interest in learning about computer architectures that are different from the mainstream,
- You want to have a better understanding of what is beyond the usual bare metal,
- You want to contribute to the development of software development tools providing unusual level of control deep into the processor core,
- You find it inspiring to influence the features of the processor you work with.

Feel free to contact Jan-Erik Lennefalk, COO, at +46 702 51 91 92 or jan-erik.lennefalk@imsystech.com with general questions about the company and Dávid Juhász, software architect, at +46 735 88 21 59 or david.juhasz@imsystech.com with your inquiries about this job and our technology.

If you find our offer interesting, make sure we hear from you today. Your application is expected in email as your CV and a brief cover letter including references sent to david.juhasz@imsystech.com. We follow up on received applications and reply to you within one week's time. Being a selected candidate, you will be invited to an interview and provided with a decision after a quick evaluation process.

REQUIREMENTS

Expected education:

- MSc in Computer Science or Software Engineering

Necessary knowledge/experience:

- 5+ years of Software Development in C++
- Developing features for a compiler, IDE, or related tools
- Understanding computer architectures
- Understanding high-level modeling

Nice to have knowledge/experience:

- LLVM/GCC and/or ONNX/Tensorflow/Glow internals
- Eclipse plug-in development
- Safety-critical and real-time systems
- Digital signal processing
- Java and JVM knowledge
- Formal methods
- MATLAB/Simulink
- Reading VHDL/Verilog