

## JOB TITLE

Software Engineer – Lean Embedded Systems

## 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 software engineers to our team. Our system software provides flexible APIs 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 platform.

## POST

As an embedded software engineer at Imsys, you work on high-impact projects with tight schedule. You have a good overview of embedded software from driver routines, through standard libraries and operating system, to the application level. You possess communication and problem-solving skills to actively contribute to tasks related to the Imsys software platform throughout its lifecycle. You develop state-of-the-art software in C/C++ and navigate confidently around in Python and Java. Still, you discuss details of the Imsys ISA daily with no fear of some assembly code to relax at the end of an intense work day. 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 software engineer, you are in the forefront of providing a great experience to our customers through defining flexible and convenient software APIs and implementing effective system software features. The main line of current development activities target implementing system software and demonstrators for the forthcoming Imsys processor and reference devices. Continuous interaction among different development departments make it possible to improve our products. You can learn about and influence the development of the microarchitecture and assembly-level ISA of Imsys processors as well as our design and development tools. 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 contribute to customer application development and 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 software engineer if

- You are ready to contribute to the design and development of the Imsys lean software platform,
- 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 actual applications or experiment with prototypes,
- 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](mailto: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](mailto: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](mailto: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 Electrical Engineering or Software Engineering

Necessary knowledge/experience:

- 5+ years of Embedded Software Development
- C/C++ and Assembly programming
- Bare-metal programming
- Understanding hardware on the component-level and reading schematics

Nice to have knowledge/experience:

- C/C++ standard library implementation
- Experience with ONNX/Tensorflow
- Digital signal processing
- Embedded Linux
- Safety-critical and real-time systems
- Communication protocols
- MATLAB/Simulink
- Reading VHDL/Verilog