

We are looking for a

Specialist Deep Learning, Department Applied Research

Who are we?

Medis was created in 1989 as a spin-off of the Leiden University Medical Centre (LUMC Netherlands). Our founder and current CSO, Hans Reiber, built the company focusing on X-ray and image analysis of the heart and with the mission to make these tools available to all medical researchers and specialists.

For over 30 years, Medis has been providing high quality quantitative analysis solutions for cardiovascular imaging to the medical community. Our heritage and core values are based on this strong purpose of contributing to a healthier society by providing the right tools to cardiologists, radiologists, researchers, and industry partners.

Based on the principle “to measure is to know” we support medical professionals with determining the best diagnosis and the subsequent treatment strategies for all patients. Our software creation and realization process is as simple, as it is unique: starting from a medical need that develops from concept to product. In Medis, this continuous innovation leads to new software solutions based on new ideas for the ever-changing cardiovascular imaging environment. And at the same time, we remain relevant in a social and sustainable way. At Medis, quality is key.

Medis. Imaging solutions in a Heartbeat.

What will your role be?

As a part of our Applied Research Department, you will contribute to Medis' growth Strategy which is aimed at Product Leadership. The team works on innovative research projects towards Deep Learning solutions, that are integrated by the Product Development Team into a Medis product (research or clinical). These amazing products are then sold by our Marketing & Sales team. At the moment we are looking for a **Specialist Deep learning** to work on either our echocardiography, multi-slice CT, or interventional cardiology product lines. Medis strives to be a product leader in the medical imaging domain and in certain cases our researchers work on a “proof-of-concept” as a study object which in turn helps drive Medis' longer term technology roadmap.

The topics to work on should be in line with the goals and priorities set in the New Product Introduction (NPI) process.

- To develop and enhance automated training and evaluation deep learning pipelines.



- To set up, train and validate deep learning models working on medical images.
- To keep up with the international literature on Deep learning techniques
- To develop innovative, robust, and vendor-independent solutions that will work in daily clinical research & practice
- To develop algorithms in preferably Python or C++. Using as much as possible standard frameworks like ITK/SimpleITK, TensorFlow/PyTorch, etc. The end-result should be portable to a solution that can be integrated into applications built in C++ in a platform independent manner
- Write maintainable code in Python and participate in code reviews of AR team members
- To write (system) documentation in English
- To collaborate with clinical partners for external testing, validation, and feedback on our innovations
- To incorporate feedback into newer versions of the software
- To participate in scientific publications of external authors
- To identify possible subjects for Medis patent applications
- When requested to train and educate other members of the AR group on the basics and best practices to start running own DL experiments.

The profile we are looking for:

- PhD or Master of Science degree in (biomedical) engineering, computer science or electrical engineering (major in imaging)
- Extensive experience with Deep learning
- Experience with C++ and/or Python programming language and relevant toolkits (for example ITK, VTK, NumPy, SciPy, Tensorflow, PyTorch) is an asset
- Experience with medical applications is an asset
- Excellent communication skills, both written and verbal, in English
- Experience with Agile development is an asset

Personal Skills and competences:

- Innovator and interested in biomedical technology
- Committed and pro-active
- Demonstrated innovative mindset
- Accurate, reliable and attentive to details
- Strong analytical skills
- Excellent written and spoken English, Dutch preferable
- Enthusiastic team player

What Medis offers you:



- An attractive compensation plan
- International, young and diverse colleagues
- Personal growth and development opportunities
- Contributing to innovative products that make a difference