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ImFusion gGmbH   June 02 2025
Agnes-Pockels-Bogen 1
80992 München
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To Whom it may Concern,

Re: "Senior Research Scientist for Interventional Medical Imaging"

I am applying for the position of Senior Research Scientist for Interventional Medical Imaging, having seen the position advertised in LinkedIn. I believe I would be a good technical fit for the role.

I am an applied mathematician by training, but have worked at the interface between academic research and industry for over ten years, in the United Kingdom and Germany, primarily in medical ultrasound but also in other clinical areas, such as ultra-low field MRI, pharmacokinetic modelling of function after liver surgery and lab-on-chip micro-fluidic devices. I have used the mathematical skills to write performant, well-documented, tested, deployable code in both python and C++, compliant with ISO 13485 and IEC 62304.

Within the job description, three specific areas are mentioned: segmentation, registration and reconstruction. I have a deep understanding of classical segmentation and reconstruction, and how, for ultrasound, such a joint approach can yield accurate results. Through my professional experience, I am aware of the challenges of developing research code into part of a clinical solution, in terms of deployability, integration with hardware, testing, documentation, as well as the difficulty of developing real-time solutions in a clinical setting.

I was a key figure in a team which was joint first place in the "Challenge on Ultrasound Beamforming with Deep Learning" competition in 2020. I am more familiar with jax, rather than pyTorch, but have a strong understanding of machine learning in general, and applied to ultrasound: I gave a invited lecture on the use of AI in therapeutic ultrasound at the most prestigious therapeutic ultrasound conference, ISTU, in 2023 and lecture graduate students on the mathematical foundations necessary to understand deep learning models.

I have permanent residency in Germany, living in Bremen, and speak conversational German. I am applying as there are structural changes at my current role which may reduce opportunities for development. Moreover, I am enthusiastic about this role as it creates tangible clinical impact in image-guided therapies. Please find enclosed a copy of my CV and let me know if you require any additional information.

Yours faithfully,

David Sinden

Attached: curriculum vitae