The Magnetic Resonance Technology and Use Design (MRTUD) lab, led by Jim Pipe in Mayo Clinic's Department of Radiology, has an opening for a computer engineer/scientist specializing in scientific algorithms. This person will work with our team of engineers and physicists on several projects for designing comprehensive technologies for rapid, next-generation MR imaging for clinical use. These technologies are implemented in software, from algorithm design (GPI/C/C++/python/qt) to the software driving the MRI scanner (C/C++ based) to image reconstruction (C/C++/CUDA).

**Candidate Qualifications.** We are seeking applicants with a Master’s Degree in computer engineering, computer science, or similar field, although strong candidates with a Bachelor’s Degree will also be considered. Candidates with a PhD will also be considered, with some change in the scope of the role. It is desirable that the candidate has experience and/or training in many of the following areas: software architecture design, development of libraries/frameworks for (e.g.) parallel programming, GPU coding (Cuda or other), signal processing, medical imaging, and AI software such as TensorFlow or PyTorch. The successful applicant must be able to work well independently and also as part of a larger team, and be able to work with several (related) projects at the same time.

**Projects:** There will be a wide variety of projects, but the primary focus will on contributing to general MR research and method development, code optimization and occasional code translation to CUDA. Some of this work will involve underlying algorithm design, some will be more platform/infrastructure design, and some will focus on methods for computational efficiency.

Additionally, we are building a new program and team to develop AI methods in medical imaging to complement our current work. The successful candidate will have many opportunities to work with this team on development of new algorithms and supporting software for clinical implementation.

**Facilities and Environment:** Scan development will primarily occur on Philips 3T and 1.5T systems dedicated to research, as well as a variety of clinical MRI scanners. The lab is housed in the new Discovery Square building (onediscoverysquare.com), part of a ~$5 billion dollar catalyst investment in the city of Rochester (dmc.mn). Mayo is ranked the #1 hospital in the USA, and Rochester is a beautiful small (but rapidly growing) city, consistently ranked as one of the best places to live in the USA. It is an easy, family-friendly place to live, and just a one hour drive south of Minneapolis.

Lab URL: https://www.mayo.edu/research/labs/magnetic-resonance-technology-use-design/

If interested, please send an email with CV to pipe.james@mayo.edu.