



## Research Fellow, AI in Cardiac MRI

**Institute:** Beth Israel Deaconess Medical Center, Harvard Medical School,

**Location:** 330 Brookline Ave, Boston, MA

**Job Summary:** Cardiovascular MR Center at Beth Israel Deaconess Medical Center and Harvard Medical School has an exciting opportunity to join our team as a Postdoctoral Fellow. You will be part of an interdisciplinary team of imaging scientists, AI scientists, radiologists, and cardiologists to develop AI tools for cardiovascular MRI. As a postdoc, you will lead technical projects in imaging technology and be responsible for creating project plans and implementing and evaluating new AI algorithms. You will also work closely with our industrial and academic partners to implement your new methods in clinical MRI systems and image analysis software.

We are particularly interested in applicants interested in technical/algorithm developments that can be readily used in clinical applications.

The position is offered for two years and may be extended based on satisfactory performance and availability of funds.

### Primary Responsibilities:

- You will collaborate with other group members to design and develop innovative AI tools to improve cardiovascular disease imaging, focusing on MRI data acquisition, reconstruction, and analysis.
- Develop novel AI tools to improve our ability to predict adverse outcomes in patients with cardiovascular disease by integrating multi-modality data, including cardiac imaging.
- Collaborate with scientists and our industry partners, Siemens Healthineers and Medis, to implement and integrate our AI models into clinical MRI scanners and image analysis platforms.
- Provide technical guidance to lab members on projects at the intersection of engineering, radiology, and cardiology.
- Conduct research in state-of-the-art deep learning models focusing on cardiac imaging and publish your novel findings.

### Required Qualifications:

- Ph.D. degree in computer science, electrical engineering, or biomedical engineering with a focus on AI and MRI
- Excellent coding skills in Python.
- Strong hands-on experience with deep learning tools (e.g., PyTorch or TensorFlow-Keras).
- Documented history of completed software projects (e.g., GitHub)
- Familiar with recent developments in DL architectures, particularly Transformers, Diffusion Models
- Track record of peer-reviewed publications in AI
- Strong communication and writing skills.

Interested applicants should email their cover letter, CV, and the names of three references to Dr. Nezafat, [mezafat@bidmc.harvard.edu](mailto:mezafat@bidmc.harvard.edu)



Advancing Cardiovascular Imaging Through Innovative Research

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