Yale SCHOOL OF MEDICINE

Postdoctoral Position in AI/ML for Cardiac Image Analysis

Yale University, New Haven, CT, USA

The Dvornek and Kwan Labs are jointly seeking a highly qualified and motivated individual at the postdoctoral level. This position will involve the development and implementation of novel algorithms for analyzing cardiac magnetic resonance imaging (MRI) data. The aim of the research project is to accurately identify MRI features that predict Clonal Hematopoiesis of Indeterminate Potential (CHIP) and associated adverse cardiovascular outcomes in cancer and non-cancer patients. Responsibilities of the postdoctoral associate will include closely collaborating with all members of the team, developing, training, testing, and interpreting predictive models on large imaging datasets, leading authorship of publications, presenting results at international meetings, and mentoring students in the lab.

Required qualifications:

- PhD (in hand or about to be obtained) in biomedical engineering, computer science, electrical engineering, biomedical informatics, or related fields.
- Strong programming skills, with experience in Python.
- Demonstrated experience in developing deep learning algorithms and training models on large image datasets.
- Good written and verbal communication skills in English.
- A track record of peer-reviewed publications.

Great to have:

- Experience with processing MRI or other medical imaging data.
- Experience with organizing and maintaining large datasets.
- Experience in machine learning model interpretation methods.

About the advisors: The selected candidate will work as part of an integrated team under the direction of Drs. Nicha Dvornek and Jennifer Kwan. Dr. Dvornek is an Assistant Professor in the Image Processing and Analysis Group, within the Bioimaging Sciences Division of the Department of Radiology & Biomedical Imaging. Her group is focused on the scientific study, development, and application of novel image analysis and machine learning techniques to solve clinical problems in biomedical imaging. Dr. Kwan is an Assistant Professor in Cardiovascular Medicine. Her lab works on translational research to understand the mechanisms behind how CHIP, a condition of aging, and other novel somatic variants may impact cardiovascular health using a multi-omics approach. She is also a clinical cardiac MRI reader and does research that integrates imaging and genomics using artificial intelligence.

Start date: As soon as possible.

Position duration: 1 year, with possibility of extension depending on funding.

How to apply: Interested individuals should email their CV, 1 page cover letter including research statement and start date availability, and a representative publication to nicha.dvornek@yale.edu and jennifer.kwan@yale.edu. Applications will be reviewed as they are received.

Yale University is an Equal Opportunity Employer. We value diversity and inclusivity and encourage all qualified individuals to apply.